NOAA Western Region Computer Programs and Problems NWS WRCP No. 60

NWWS PRODUCT RETRANSMISSION PROGRAM

William R. Schneider

WSFO Los Angeles

March 1990

U.S. DEPARTMENT OF COMMERCE / National Oceanic and Atmospheric Administration / National Weather Service

NOAA Western Region Computer Programs and Problems NWS WRCP No. 60

NWWS PRODUCT RETRANSMISSION PROGRAM

William R. Schneider
WSFO Los Angeles

March 1990

UNITED STATES
DEPARTMENT OF COMMERCE
Robert A. Mosbacher, Secretary

National Oceanic and
Atmospheric Administration
John A. Knauss, Under Secretary and Administrator

National Weather Service
Elbert W. Friday, Jr., Assistant Administrator for Weather Services

This publication has been reviewed and is approved for publication by Scientific Services Division, Western Region

Christopher D. Lee for

Kenneth B. Mielke, Chief
Scientific Services Division
Salt Lake City, Utah

TABLE OF CONTENTS

NWWS PRODUCT RETRANSMISSION PROGRAM

William R. Schneider - WSFO Los Angeles

I. INTRODUCTION

Under the new NWWS system, any product in a node's local AFOS database may be retransmitted under the AFOS identifier CCCRETRAN. This can be done by editing the product on AFOS and storing it under the header CCCRETRAN. However, this method cannot be used for products longer than 5 pages.

The AFOS background program RT.SV was developed to retransmit products of any size under either the node's own RETRAN heading, or in cases of backup, the node's backup RETRAN heading.

Products edited on AFOS and placed under the RETRAN heading will be stripped of their regular AFOS identifier (CCCNNNXXX). Many users of NWWS data, such as the L. A. Times, rely on the AFOS identifier to store the products received into their own computer system database. To facilitate the use of these systems the RT program was designed to maintain the products original heading below the CCCRETRAN heading.

II. METHODOLOGY AND SOFTWARE STRUCTURE

The RT program is an assembly language program which allows retransmission of any current product or previous version under the node's RETRAN heading, or under the backup node's RETRAN heading.

The command line for retransmission under a node's own RETRAN heading is:

RUN:RT CCCNNNXXX #/V

Where: CCCNNNXXX	-	is any product in the node's AFOS database.
#/V	-	# is previous version number, from 0-99, of the product to be retransmitted.

Note: The order of the local switches is unimportant, and the #/V switch is optional for retransmission of the current product.

The program yanks the entire product specified from the AFOS database through the foreground/background interface. An RDOS disk file is created, for the product. Filename RETRAN.* (where * is a letter from A-Z) is created to store the product. Since a product may still be in the process of storing when RT is run again, the program searches for the first unused filename.

After a file is created the program writes the RETRAN header to the file. If the local switch /B is used in the command line, the program will place the product under the

backup site RETRAN heading. For example, the backup site for WSFO LAX is WSFO PHX. The command line for retransmission by WSFO LAX under WSFO PHX RETRAN heading (PHXRETRAN) is:

RUN:RT CCCNNNXXX/B #/V

Where: CCCNNNXXX	-	any product in the node's AFOS database.
/B	-	specifies backup site node identifier to be used.
#/V	-	# is previous version number, from 0-99, of the product to be retransmitted.

Note: The order of the local switches is unimportant and the /V switch is optional for retransmission of the current product.

The program addresses all RETRAN products to the State Distribution Circuit (SDC).

After the product, including the original product heading, is written to the RDOS file RETRAN.*, the program queues the file to the AFOS store processor. After the file is stored in AFOS under the appropriate identifier, the file is deleted by AFOS.

Since the RETRAN product header is different for each office using the program, a setup feature is contained within the program to set the node's own CCC and the backup node's CCC within the program code. The /S global switch is used to initiate the setup feature. The format for the setup feature is:

RUN:RT/S CCC/P CCC/B

Where:	/S	-	Global switch to initiate setup feature.
	CCC/P	-	CCC is primary node identifier.
	CCC/B	-	CCC is backup node identifier.

III. CAUTIONS AND RESTRICTIONS

If AFOS happens to crash before the AFOS store processor has deleted the RETRAN.* file, the file may be left on the disk. Although the program will simply use another filename the next time the program is run, the ASM may wish to add a command to the sitestop macro to delete any of the RETRAN.* files left on SYSZ.

IV. REFERENCES

WSOM Chapter C-63, NOAA Weather Wire Service Dissemination.

NWWS PRODUCT RETRANSMISSION PROGRAM

PART A: PROGRAM INFORMATION AND INSTALLATION PROCEDURE

PROGRAM NAME: RT.SV **AAL ID:**
Revision No.: 1.00

PURPOSE: RT.SV retransmits any current product or previous version in a node's AFOS database on the NWWS. Products may be retransmitted under the node's own RETRAN heading or the backup node's RETRAN heading. There is no limit to the product size, and the original header (CCCNNNXXX) of the product is maintained.

PROGRAM INFORMATION:

Development Programmer:
William R. Schneider

Location: WSFO Los Angeles
Phone: FTS 793-7218

Maintenance Programmer
William R. Schneider

Location: WSFO Los Angeles
Phone: FTS 793-7218

Language: Data General Assembly Language

Save file creation dates: 12/23/89

Running time: variable - about 15 seconds for 5 page product.

Disk Space:

Program files		
RT.SV	-	8 RDOS Blocks
Data files		
RETRAN.(A-Z)	-	variable

PROGRAM REQUIREMENTS:

Program files:	Action:
RT.SV	W
Data files:	W
RETRAN.(A-Z)	

AFOS Products:	Action:	Comments:
CCCRETRAN	Stored	Primary node
cccRETRAN	Stored	Backup node

LOAD LINE:

```
RLDR/P RT ABG.LB
```

PROGRAM INSTALLATION:

1. The save file, RT.SV should be moved from the program diskette to an applications directory, and the appropriate link entry should be made on the default directory.

2. Run the RT program in the setup mode (/S global switch) to change the primary and backup node identifiers. The default primary and backup node's are CCC.

NWWS PRODUCT RETRANSMISSION PROGRAM

PART B: PROGRAM EXECUTION and ERROR CONDITIONS

PROGRAM NAME: RT.SV **Revision No.:** 1.00

PROGRAM EXECUTION:

1. After the program has been installed the program must be run in the setup mode to set the primary and backup node identifiers. The format for the setup mode is:

   RUN:RT/S CCC/P CCC/B

WHERE:	RT/S	-	Specifies the program is to be run in setup mode.
	CCC/P	-	CCC is the primary node identifier.
	CCC/B	-	CCC is the backup node identifier.

   Note: Make sure the CCCRETRAN key(s) for your primary (and/or backup) nodes are in your database before running in the setup mode.

2. To retransmit programs under the AFOS heading CCCRETRAN enter the following command:

RUN:RT CCCNNNXXX #/V	-	retransmit product under local node identifier.

   or

RUN:RT CCCNNNXXX/B #/V	-	retransmit product under backup node identifier.

Where:	RT	-	name of program.
	CCCNNNXXX	-	any product in the local AFOS database.
	/B	-	local switch to send product under backup node identifier.
	#/V	-	optional parameter, where # is previous version number, from 0-99, for retransmission.

ERROR CONDITIONS:

1. If the key name specified is not in the local AFOS database, the program will return the following error message to the ADM:

   JOB RT ABORTED! ERROR CONDITION: INVALID KEY

2. If the version requested does not exist, the program will return the following error message to the ADM:

   JOB RT ABORTED! ERROR CONDITION: VERSION #

3. If the product for retransmission has been purged, the program will return the following error message to the ADM:

   JOB RT ABORTED! ERROR CONDITION: PURGED

4. If the product is a valid AFOS key in the local AFOS database and there is a problem reading the data from this key, the program will return the following error message to the ADM:

   JOB RT ABORTED! ERROR CONDITION: NOT FOUND

5. If the message "!!F DPCM 12:40:00 E267:CFSTO FILE SYSZ:RETRAN.* IN ERROR" appears on the dasher, it may be due to one of the following reasons: 1) The setup program has not been run to set the primary and/or backup node's CCC. 2) An invalid CCC was entered for the primary and/or backup node. 3) The CCCRETRAN key for the primary and or backup node is not in your database.

PREFACE

This Western Region publication series is a subset of our Technical Memorandum series. This series will be devoted exclusively to the exchange of information on and documentation of computer programs and related subjects. This series was initiated because it did not seem appropriate to publish computer program papers as Technical Memoranda; yet, we wanted to share this type of information with all Western Region forecasters in a systematic way. Another reason was our concern that in the developing AFOS-era there would be unnecessary and wasteful duplication of effort in writing computer programs in National Weather Service (NWS). Documentation and exchange of ideas and programs envisioned in this series hopefully will reduce such duplication. We also believe that by publishing the programming work of our forecasters, we will stimulate others to use these programs or develop their own programs to take advantage of the computing capabilities AFOS makes available.

We solicit computer-oriented papers and computer programs from forecasters for us to publish in this series. Simple and short programs should not be prejudged as unsuitable.

The great potential of the AFOS-era is strongly related to local computer facilities permitting meteorologists to practice in a more scientific environment. It is our hope that this series will help in developing this potential into reality.

NOAA WESTERN REGION COMPUTER PROGRAMS AND PROBLEMS NWS WRCP

1 Standardized Format for Computer Series. Revised January 1984. (PB85 109668)
2 AFOS Crop and Soil Information Report Programs. Kenneth B. Mielke, July 1979. (PB85 110419)
3 Decoder for Significant Level Transmissions of Raobs. John A. Jannuzzi, August 1979. (PB85 109676)
4 Precipitable Water Estimate. Elizabeth Morse, October 1979.
5 Utah Recreational Temperature Program. Kenneth M. Labas, November 1979.
6 Normal Maximum/Minimum Temperature Program for Montana. Kenneth B. Mielke, December 1979. (PB85 112878)
7 Plotting of Ocean Wave Energy Spectral Data. John R. Zimmerman, December 1979. (PB85 112860)
8 Raob Plot and Analysis Routines. John A. Jannuzzi, January 1980.
9 The SWAB Program. Morris S. Webb, Jr., April 1980. (PB80 196041)
10 Flash-Flood Procedure. Donald P. Laurine and Ralph C. Hatch, April 1980. (PB80 298658)
11 Program to Forecast Probability of Summer Stratus in Seattle Using the Durst Objective Method. John R. Zimmerman, May 1980.
12 Probability of Sequences of Wet and Dry Days. Hazen H. Bedke, June 1980. (PB80 223340)
13 Automated Montana Hourly Weather Roundup. Joe L. Johnston, July 1980. (PB81 102576)
14 Lightning Activity Levels. Mark A. Mollner, July 1980. (PB81 108300)
15 Two FORTRAN Applications of Wind-Driven Ekman Water Transport Theory: Upwelling Index and Storm Tide. Kent S. Short, July 1980. (PB81 102568)
16 AFOS System Local Data Base Save and Rebuild Procedures or a Master Doomsday Program. Brian W. Finke, July 1980. (PB81 108342)
17 AFOS/RDOS Translator Subroutine. Morris S. Webb, Jr., August 1980. (PB81 108334)
18 AFOS Graphics Creation from FORTRAN. Alexander E. MacDonald, August 1980. (PB81 205304)
19 DATAKEY0/ Repair Program. Paul D. Tolleson, August 1980. (PB81 102543)
20 Contiguous File Transfer from the DPCM to the DCM. Paul D. Tolleson, September 1980. (PB81 128035)
21 Freezing Level Program. Kenneth B. Mielke, September 1980. (PB81 128043)
22 Radar Boresighting Verification Program. Thomas E. Adler, November 1980. (PB81 182677)
23 Accessing the AFOS Data Base. Matthew Peroutka, January 1981. (PB81 190266)
24 AFOS Work Processor. Morris S. Webb, Jr., February 1981. (PB81 210007)
25 Automated Weather Log for Terminal Forecasting. John A. Jannuzzi, February 1981. (PB81-210999)
26 Program to Computer Downwind Concentrations from a Toxic Spill. John R. Zimmerman, February 1981. (PB81 205296)
27 Animation of AFOS Graphics. James R. Fors, August 1987 (revision). (PB87 220109/AS)
28 AFOS Interactive Graphics. James R. Fors, Don Laurine, and Sandy MacDonald, April 1981. (PB85 110401)
29 Computer Programs for Aviation Forecast Transmission. Kenneth B. Mielke and Matthew R. Peroutka, May 1981. (PB85 110518)
30 AFOS Product Collective Program. Morris S. Webb, Jr., September 1981. (PB85 109841)
32 Automation of Hourly Aviation Observation Calculations. W. Paul Duval, October 1981. (PB85 109650)
33 Mesoscale Objective Analysis. Andrew J. Spry and Jeffrey L. Anderson, December 1981. (PB85 109825)
34 Orographic Snowfall Rate Model for Alta, Utah. Steven K. Todd and Glenn E. Rasch, December 1981. (PB85 109874)
35 F-6 Monthly Climatic Summary Program For AFOS. Peter G. Mueller, May 1982. (PB85 109858)
36 Soaring Forecast Program. D.S. Toronto and G. R. Lussky, Revised March 1986. (PB86 173523/AS)
37 Program to Work Up Climatic Summary Weather Service Forms (F-6, F-52). Peter G. Mueller, August 1982. (PB85 109866)
38 The Hovmoller Diagram. Pamela A. Hudadoff, September 1982. (PB85 112159)
39 850-Millibar Charts Derived from Surface Data. Jeffrey L. Anderson, December 1982. (PB85 112175)
40 AFOS Vector Graphic to Grid Point Program. James R. Fors, December 1982. (PB85 109544)
41 A Pilot Briefing Program for the Background Partition. Kenneth B. Mielke and Joe L. Johnston, March 1983. (PB85 109551)
42 AEV Local Verification for Aviation, Precipitation, and Temperature Programs: AV, REL, TEM. Timothy W. Barker, Revised September 1987. (PB88 115662/AS)
43 OBLOG. Nancy Larsen, December 1983. (PB85 109528)
44 Communications Software for Olympics Micromation Computer System. Glen Sampson, June 1984. (PB85 109510)
45 PLOTFILE Appender. Wendy L. Wolf, July 1984. (PB85 109502)
46 Spectral Wave Data Analysis (Non-Directional). Lawrence Dunn, August 1984. (PB85 109577)
47 Isentropic Objective Analysis. Jeffrey L. Anderson, August 1984. (PB85 112167)
48 Hurricane Plotting Program. Paul D. Tolleson, October 1984. (PB85 121432)
49 Hemispheric Spectral Wave Analysis (Waves 0 to 7). Mary F. Milkovich, August 1985. (PB86 108719/AS)
50 AOS Graphic to Grid Point Conversion and Departure from Normal Programs. Jeffrey L. Anderson and Mark A. Mathewson, August 1985. (PB85 248110/AS)
51 Sunrise/Sunset and Moonrise/Moonset. Glenn R. Lussky, January 1986 (Revised). (PB86 157229/AS)
52 Objective Contour Analysis Using the Surface of Least Bending (Spline Analysis). Les Colin, November 1985. (PB86 128675/AS)
53 DATACOL - AFOSPLOT Program. Donald P. Laurine and Timothy K. Helble, February 1986. (PB86 161866/AS)
54 Hemispheric Spectral Analysis Program. Craig C. Peterson, April 1986. (PB 183662/AS)
55 Convective Cross Section Analysis. Timothy W. Barker, June 1987. (PB87 204566)
56 SWELL Program. Craig C. Peterson, August 1987. (PB87 229795/AS)
57 Watchdog Program. William R. Schneider and Craig C. Peterson, October 1988. (PB89 122535/AS)
58 Daily Climate Summary for MAPSO. Joe L. Johnston, August 1989. (PB89 230841/AS)
59 SEAPLOT. Bob Diaz and Steve Todd, December 1989. (PB90 151333/AS)

NOAA SCIENTIFIC AND TECHNICAL PUBLICATIONS

The National Oceanic and Atmospheric Administration was established as part of the Department of Commerce on October 3, 1970. The mission responsibilities of NOAA are to assess the socioeconomic impact of natural and technological changes in the environment and to monitor and predict the state of the solid Earth, the oceans and their living resources, the atmosphere, and the space environment of the Earth.

The major components of NOAA regularly produce various types of scientific and technical information in the following kinds of publications.

PROFESSIONAL PAPERS--Important definitive research results, major techniques, and special investigations.

CONTRACT AND GRANT REPORTS--Reports prepared by contractors or grantees under NOAA sponsorship.

ATLAS--Presentation of analyzed data generally in the form of maps showing distribution of rainfall, chemical and physical conditions of oceans and atmosphere, distribution of fishes and marine mammals, ionospheric conditions, etc.

TECHNICAL SERVICE PUBLICATIONS--Reports containing data, observations, instructions, etc. A partial listing includes data serials; prediction and outlook periodicals; technical manuals, training papers, planning reports, and information serials; and miscellaneous technical publications.

TECHNICAL REPORTS--Journal quality with extensive details, mathematical developments, or data listings.

TECHNICAL MEMORANDUMS--Reports of preliminary, partial, or negative research or technology results, interim instructions, and the like.

Information on availability of NOAA publications can be obtained from:

NATIONAL TECHNICAL INFORMATION SERVICE

U. S. DEPARTMENT OF COMMERCE

5285 PORT ROYAL ROAD

SPRINGFIELD, VA 22161