NOAA Eastern Region Computer Programs
and Problems NWS ERCP - No. 28

VIDTEX

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Scientific Services Division
Eastern Region Headquarters
February 1985

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

NOAA TECHNICAL MEMORANDUM

National Weather Service, Eastern Region Computer Programs and Problems

The Eastern Region Computer Programs and Problems (ERCP) series is a subset of the Eastern Region Technical Memorandum series. It will serve as the vehicle for the transfer of information about fully documented AFOS application programs. The format ERCP - No. 1 will serve as the model for future issuances in this series.

1 An AFOS version of the Flash Flood Checklist. Cynthia M. Scott, March 1981. (PB81 211252).

2 An AFOS Applications Program to Compute Three-Hourly Stream Stages. Alan P. Blackburn, September 1981. (PB82 156886).

3 PUPPY (AFOS Hydrologic Data Reporting Program). Daniel P. Provost, December 1981. (PB82 199720).

4 Special Search Computer Program. Alan P. Blackburn, April 1982. (PB83 175455).

5 Conversion of ALEMBIC$ Workbins. Alan P. Blackburn, October 1982. (PB83 138313).

6 Real-Time Quality Control of SAOs. John A. Billet, January 1983. (PB83 166082).

7 Automated Hourly Weather Collective from HRR Data Input. Lawrence Cedrone, January 1983 (PB83 167122).

8 Decoders for FRH, FTJ and FD Products. Cynthia M. Scott, February 1983. (PB83 176057).

9 Stability Analysis Program. Hugh M. Stone, March 1983. (PB83 197947).

10 Help for AFOS Message Comp. Alan P. Blackburn, May 1983. (PB83 213561).

11 Stability and Other Parameters from the First Transmission RAOB Data. Charles D. Little, May 1983. (PB83 220475).

12 TERR, PERR, and BIGC: Three Programs to Compute Verification Statistics. Matthew R. Peroutka, August 1983. (PB84 127521).

13 Decoder for Manually Digitized Radar Observations. Matthew R. Peroutka, June 1983. (PB84 127539).

14 Slick and Quick Data Entry for AFOS Era Verification (AEV) Program. Alan P. Blackburn, December 1983. (PB84 138726).

15 MDR--Processing Manually Digitized Radar Observations. Matthew R. Peroutka, November 1983. (PB84 161462)

16 RANP: Stability Analysis Program. Hugh M. Stone, February 1984.(PB84 1614

17 ZONES. Gerald G. Rigdon, March 1984. (PB84 174325)

18 Automated Analysis of Upper Air Soundings to Specify Precipitation Type. Joseph R. Bocchieri and Gerald G. Rigdon, March 1984. (PB84 174333)

NOAA EASTERN REGION COMPUTER PROGRAMS AND PROBLEMS - No. 28

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VIDTEX

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WSFO WASHINGTON DC

I. Introduction

A. Purpose

This program will accept up to five AFOS products, split them up with separate headers for each section and reformat from up to an 8Ø character line to any line length less than 8Ø characters. It will also put in page separators for videotex format and insert document numbers and an ending code,if needed.

B. Motivation

A marine information service was set up between the WSFO Washington DC and the University of Maryland. The service allows users to call in to a computer at the University of Maryland and request National Weather Service forecast products. Since many of our products, such as zones, coastal waters, and offshore forecasts, are divided up into sections, a program was needed that would allow us split them up, so that a user could request only the sections that were needed. These forecasts also needed to be put into videotex format (32 characters per line and 16 lines per page).

C. Benefits to the user

This program allows you to separate out sections of forecast products and set each up with its own header. It will also reformat a product of up to 8Ø characters per line to a line length less than 8Ø characters. It puts in page separators and document numbers or filenames (for storage in another computer), if needed. It saves a lot of time over having to do this by hand. Our marine information service might not be feasible without a program like this.

II. Methodology and Software Structure

A.

VIDTEX begins by reading the information associated with the switches (the switches are defined later). It will then run one of two options. The first option simply takes one AFOS product and reformats it to the specifications in the command line.

The second option (using B global switch) uses the VID.DT file (or a file linked to VID.DT) to separate portions of forecast products and place a header that is specified in the VID.DT file on each portion. A detailed explanation of the VID.DT file is given in the installation instructions. A sample VID.DT appears in Figure 1. Figure 2 shows the products it refers to.

The program first reads in the AFOS ID's of the input products. It then opens the first input product and searches the first six lines for the mass media header date/time line (the first line that begins with a number).

Then the program starts searching for a line (heading) that matches a heading in the VID.DT file (a default value of the first 12 characters is used for matching, but this can be changed with local switch G). If it cannot match the heading it will write an error message to a file (if requested with global switch M) and go on to the next heading.

After the program matches a line in the product to a heading line in VID.DT, it writes the remaining lines from VID.DT that are designated to go with that heading including the date/time line if specified.

The program then looks for the first line after the heading that begins with a period (.). If it does not find a period within the first 7 lines (value can be changed with local switch K) after the heading, it will write an error message to a file (if requested with global switch M). However, the program will still look for the first line begining with a period.

Once it finds the first line that begins with a period, it begins to reformat the lines into 32 character lines (value can be changed with local switch C). Line length includes a carriage return and line feed. After every sixteen reformatted lines have been written, the program inserts a "\" reverse slant (this is for page separation) on a line by itself. The page separator can be omitted by using global switch J or changed with local switch P.

When the program finds either a $$ or MM at the end of a line, it will stop reformatting after writing those characters and go on to the next heading specified in VID.DT. The ending characters (cutoff codes) can be ignored by using global switch X or changed with local switch E.

After the program finds all the headers specified in VID.DT for one AFOS product, it goes to the next AFOS product specified

and starts the reformatting on that one. When all the AFOS products specified in the VID.DT file are processed, an end of message character can be placed on a line by itself if one is specified with local switch F.

B.

The program takes products out of the AFOS database, reformats and combines them with headings from a file called "VID.DT" (see Figures 1 and 2). The program writes to the output file "VID.SC" for the reformatted messages. "VID.SC" is stored into the AFOS database in location VIDEOTEX unless local switch O is used to change the location. Figure 3 shows a sample VIDEOTEX output resulting from using the VID.DT file in Figure 1 to process the products shown in Figure 2. The program also writes error messages to a file called "VIDTEXMSG" if global switch B and M are used. It stores this file into the database in location VIDTEXMSG.

C.

The main program is called "VIDTEX" and starts the processing by opening the AFOS locations and doing some time checks. The following subroutines are used to help accomplish this and do the remainder of the processing:

RDSWV - reads the switches that input data and change the default settings of the program.

IASC - a function which converts ASCII to integer. Adapted from a function INTCVT written by Matt Peroutka (Peroutka, 1981).

NCURJT - adapted from a subroutine written by Jack May, DMIC WSFO Cleveland, OH, which converts the system time to current Julian time in minutes.

ZDTG - converts system time to unpacked ASCII for WMO header.

RDT - reads the AFOS ID's of the input products from the "VID.DT" file.

PVREAD - This is an updated version of the AFREAD subroutine written by Matt Peroutka (Peroutka, 1981). It does the same things as AFREAD, but it also places the line where the 2Ø3 (end-of-product) is found into the IOUT array.

WRTERR - writes error messages to "VIDTEXMSG" for errors that are found during processing.

COMP - compares lines from an AFOS product with those in "VID.DT". If match is found, it writes lines from "VID.DT" to "VID.SC".

RDWRT - does the reformatting of 8Ø-character lines down to 32-character lines. It also checks for the number of lines per page and inserts a page separator if needed.

WRTS - finds the end of a line, puts in a carriage return and a line feed and writes the line to a file.

III. Cautions and Restrictions

- The program should not be used on tabular data. It will run on tabular data, but all the columns will be out of place.

- When using the VID.DT file, if the last character to be checked for matching a heading of in a forecast product is a space, place another character in the column after the space. For example, if the first 12 characters are to be checked, and the 12th character is a space, then you must put use a 13th character to preserve that space.

- When products are reformatted from 8Ø-character lines to 32-character lines, the number of pages in the AFOS output products increases significantly. When these products reach 15 pages and are stored with a low priority, the products can get mixed.

IV. References

Brehm, F.: Fortran Utility Library - UTIL.LB, AFOS System Programming Note No. 16.

Chuisane, D.: CFSTO, AFOS Programming Note No. 93

Peroutka, M., 1981: Accessing the AFOS Database, NOAA Western Region Computer Programs and Problems No. 23.

Schuster, M.: Background Programming with AFOS, AFOS System Programming Note No. 9Ø

Subroutine CURJTIME adapted from subroutine written by Jack May, DMIC Cleveland, OH.

V.

ERCP #28
FEBRUARY 1985

VIDTEX

PART A: PROGRAM INFORMATION AND INSTALLATION PROCEDURE

PROGRAM NAME: VIDTEX.SV

AAL ID:
REV NO.: 1.ØØ

PURPOSE:
This program will accept up to five AFOS products, split them up with separate headers for each section and reformat from up to an 8Ø character line to any line length less than 8Ø characters. It will also put in page separators for videotex format and insert document numbers and an ending code,if needed.

PROGRAM INFORMATION:

Development Programmer:
G. Rigdon
Location: WSFO Washington, DC
Phone: FTS 763-8Ø88
Language: DG FORTRAN IV/5.2Ø
Date: Ø1/14/85

Maintenance Programmer:
G. Rigdon
Location: WSFO Washington, DC
Phone: FTS 763-8Ø88
Type: Normal
Revision Date: NA

Run Time: Depends on length and number of products.
Disk Space: Program File - 57 RDOS Blocks
Data Files - Depends number of products used

PROGRAM REQUIREMENTS

Program Files:

Name	Comments
VIDTEX.SV	

Disk Files:

Name	Location	Action	Comments
VID.DT	Ø or ØF	Read	Contains input AFOS ID's and headings for sections of products when global

switch B is used.

AFOS Products:

ID	Action	Comments
cccnnnxxx	Read	Any products designated by local switch I or VID.DT
VIDEOTEX	Stored	Reformatted product (location can be changed by using local switch O)
VIDTEXMSG	Stored	Contains errors or possible errors detected during processing of products. (Produced only when global switch M) is used.)

LOAD LINE

RLDR VIDTEX PVREAD RDSWV NCURJT RDT WRTERR IASC ZDTG COMP RDWRT WRTS <TOP BG UTIL FORT>.LB

PROGRAM INSTALLATION

1. Put VIDTEX.SV on DPØ or on DPØF linked to DPØ.

2. Make sure VIDEOTEX and VIDTEXMSG are in the database (unless you want to use a different output product and /or will not use global /M). Set the alarm on VIDTEXMSG.

3. Prepare and store on the DPØ or on DPØF linked to DPØ a file named VID.DT. Another name can be used, but before it can be used by the program, it must be linked to VID.DT. See below for instructions and refer to Figure 1 in ERCP #28 for sample VID.DT file.

PREPARATION OF VID.DT
(Refer to Figure 1 during this explanation.)

The first line of the file contains the AFOS ID of the first input product to be used. Up to 5 products can be used as input. If you have 1 product use 1 line, 2 products use 2 lines, etc. Figure 1 has 3 products BOSOFFBOS, WBCOFFWBC, and WBCLFPWBC. The

next line of the file begins with a "/" slant. It has a series of numbers on it, each preceeded by a slant. These are codes for the program. The first 2 code numbers (/1/2) in Figure 1 are associated with the first AFOS ID in the first line of the file. Each code number corresponds to a section of BOSOFFBOS that is to be separated out. /2 is followed by a space. After the space, there is a group of 3 code numbers (/3/4/5) followed by a space. This group of code numbers is associated with the second AFOS ID in the second line of the file. Each number corresponds to a section of WBCOFFWBC that is to be separated out. After the space is 1 code number (/6). This code number is associated with the third AFOS ID in the third line of the file. Only one section is to be separated out of WBCLFPWBC.

The numbers must always be preceeded by a "/" slant and a space must be placed between each group of numbers to correspond with the AFOS ID's entered in the first 1 to 5 lines of the file. If you have 5 AFOS ID's entered, you must have 5 groups of numbers. The numbers should be consecutive and should not be repeated. Only one line of VID.DT can be used for this purpose, so the amount of code numbers that can be used is limited to the amount that can fit on that line.

The following lines in the file are lines of data which are to be used by the program either to compare a heading or write a line to the output file (VID.SC). The first two or three characters on a line represent the code number to be used (ex. /1). The data that goes with that code number begins in the eleventh space on the line.

The first line of the lines that have the same code number is used for comparision with a header in the AFOS product associated with that code number. This line must have at least the same number of characters on it as are needed to match the header. If the default value is used, the line must have 12 or more characters on it. If the last character to be matched is a space, you must have one extra character after the space. If a match is found, the program will write the remaining lines that are associated with that code number to the output file (VID.SC). If an asterisk "*" is in space 11, the program will write the mass media header date/time line from the AFOS product to the output file (VID.SC).

After the program finishes writing the headings from the "VID.DT" file, it goes back to the AFOS product and begins reformatting and writing lines of text starting with the first line that begins with a period after the header that it matched. It quits writing for each heading when it finds the cutoff codes

($$ or MM). See explanation of local switch E and global switch X.

The headings that are in the "VID.DT" file should not be longer than the line length that is wanted in the finished product. The program does not reformat these lines.

After the headings are written a blank line is also written.

The last line of the "VID.DT" file should have a code number that is not to be used (any number will do that is not used elsewhere).

VIDTEX

PART B: PROGRAM EXECUTION AND ERROR CONDITIONS

PROGRAM NAME: VIDTEX.SV

AAL ID:
REV NO.: 1.ØØ

PROGRAM EXECUTION:

The command line uses the following format:

RUN:VIDTEX/[global switches] [input data]/[local switches]

See below for definition of switches. You will probably want to set up a macro for each use of the program.

ERROR CONDITIONS

ADM MESSAGES	MEANING
JOB CCCNNNXXX ABORTED - ERROR CONDITION: PLS RE-STORE	VIDTEX can't read the input product. Edit and restore. Will appear only when global switch B is NOT used.

DASHER MESSAGES	MEANING
NONE	

VIDTEXMSG MESSAGES	MEANING
1. COULD NOT READ...PLEASE RE-STORE PRODUCT	VIDTEX can't read the input product. Edit and re-store.
2. COULD NOT MATCH HEADING ...CHECK FORMAT	VIDTEX could'nt find a heading in AFOS product that matched one in VID.DT file.
3. PERIOD (.) MISSING AFTER HEADING	No line that began with a . was found after matching heading was found.

4. PERIOD (.) POSSIBLY MISSING AFTER HEADING	A line beginning with a . was found but it was more than 7 lines after the heading. (The number of lines can be changed with local switch K)
5. PRODUCT TOO OLD	This means that a product was over 6 hours old, however it was still processed. (The time can be changed with local switch T)

GLOBAL SWITCHES FOR VIDTEX

B

This option uses the VID.DT file to input up to 5 AFOS products. It also allows these products to be separated into sections with their own headers. If this switch is not used, the program will reformat one product input with local switch I.

J

This option means that no page separators are to be used. The default page separator is \ (reverse slant). This can be changed by using local switch P.

M

This option is used with global switch B. This produces a list of errors or possible errors detected during processing. The output is stored in AFOS location VIDTEXMSG.

W

This option will produce a WOUSØØ header using the station ID from the SKEL file and the system time.

X

This option tells the program to ignore any cutoff codes. The default cutoff codes are $$ of MM. These defaults can be changed using local switch E.

LOCAL SWITCHES FOR VIDTEX

A

This switch is used to change the default addressee for the output AFOS location. Default addressee is the station ID from the SKEL file. Ex.: E/A or ØØØ/A

C

This switch is used to change the default number for the number of characters on a line (this includes a carriage return and line feed at the end of each line). Default is 32. Ex.: 5Ø/C or 42/C.

D

This switch is used to change the default priority of the output AFOS product. Default is 3. Ex.: 2/D or 4/D.

E

This switch is used to change the default cutoff codes. The cutoff codes stop the processing of the input data. Two characters must be entered, but they can be the same character. The default codes are $$ or MM at the end of a line. Ex.: GA/E (gives cutoff codes GG and AA) or KK/E (gives only one cutoff code of KK)

F

This switch is used to place a code at the end of the reformatted AFOS product. A computer that you might send this message to may need one. Up to 4 characters can be used. Ex.: |/F or ~|/F.

G

This switch is used with global switch B and the VID.DT file to change the default value of the number of characters used when comparing headings from the AFOS input location with those from the VID.DT file. The default value is 12. This should be an even number and the number of characters is limited to 16. Ex.: 1Ø/G or 14/G.

H

This switch is used to change the default value for a line length that is considered to be the end of a heading or the end of a paragraph. If the number of characters on a line is less than this value, no characters from the next line are added to the end of it. The default value is 5Ø. Ex.: 3Ø/H or 41/H.

I

This switch is used to tell the program what AFOS location to use as input. It can only be used when global switch B is NOT used. Ex.: WBCLFPWBC/I.

K

This switch is used to change the default setting for the number of lines used for the error message "PERIOD (.) POSSIBLY MISSING AFTER HEADING" that is put into the AFOS product VIDTEXMSG if global switch M is used. The default value is 7. Ex.: 5/K or 9/K.

L

This switch is used to change the default value of the number of lines per page. This is where a page separator is placed (if needed). The default is 16. Ex.: 14/L or 2Ø/L.

N

This switch is used to enter a document number or file name at the beginning of the AFOS output product. There is an 18 character limit. This should NOT be used with the global switch B. If global switch B is used, document numbers and filenames should be placed in the VID.DT file. Ex.: ~7Ø16/N or FILENAME/N.

O

This switch is used to change the default AFOS output location. The default is VIDEOTEX. Ex.: WBCWRKVID/O.

P

This switch is used to change the default character of the page separator. Up to 4 characters can be used. The default is \ (reverse slant). Ex.: |/P or ~\|/P.

S

In the VID.DT file, after a match of headers is found, several lines can be written from VID.DT to the output file. In the default case, the first 2 lines written are the document number and the page separator. The default value is 2 so that these lines are not counted as lines on a page. This switch is used to change that default setting, when a different number of lines are not to be counted as lines on a page. Ex.: 1/S or 3/S.

T

This switch is used to change the default value of the time that a product would be stored in the database to be considered old. This time is used only when the global switch M is used for

error messages. The amount of time is in minutes. The default value is 360 minutes or 6 hours. Ex.: 240/T or 500/T.

```
BOSOFFBOS
WBCOFFWBC
WBCLFPWBC
/1/2 /3/4/5 /6
/1        SOUTH OF NOV
/1        ~77Ø3
/1        \
/1        NOAA/NATIONAL WEATHER SERVICE
/1        FORECAST OFFICE BOSTON MA
/1        OFFSHORE FORECAST
/1        SABLE ISLAND TO NORTHEAST
/1        CHANNEL
/1        *
/2        GEORGES BANK
/2        ~77Ø4
/2        \
/2        NOAA/NATIONAL WEATHER SERVICE
/2        FORECAST OFFICE BOSTON MA
/2        OFFSHORE FORECAST
/2        GEORGES BANK FROM NORTHEAST
/2        CHANNEL TO GREAT SOUTH CHANNEL
/2        *
/3        HUDSON CANYON
/3        ~77Ø6
/3        \
/3        OFFSHORE FORECAST
/3        HUDSON CANYON TO BALTIMORE
/3        CANYON
/3        *
/4        BALTIMORE CA
/4        ~77Ø7
/4        \
/4        BALTIMORE CANYON TO
/4        HATTERAS CANYON
/4        *
/5        HATTERAS CAN
/5        ~77Ø8
/5        \
/5        HATTERAS CANYON TO
/5        BLAKE RIDGE
/5        *
/6        DCØ1-DC AND V
/6        ~7Ø1Ø
/6        \
/6        DC AND VICINTY FORECAST
/6        *
/1Ø       FAKE
```

Figure 1. Sample VID.DT File

```
BOSOFFBOS
WOUS00 KBOS 161500??ES

OFFSHORE MARINE FORECAST
NATIONAL WEATHER SERVICE BOSTON MA
1000 AM EST WED JAN 16 1985

MARINE FORECAST FOR THE NEW ENGLAND CONTINENTAL SHELF AND SLOPE
WATERS WEST OF LONGITUDE 60 DEGREES...OUT TO ONE THOUSAND FATHOMS

AN INTENSE LOW..ABOUT 28.55 INCHES..WILL REMAIN NEAR NEWFOUNDLAND
THROUGH TONIGHT. A RIDGE OF HIGH PRESSURE WILL MOVE ACROSS THE
FORECAST WATERS TONIGHT AND ANOTHER LOW WILL FORM OFF THE SOUTHERN
NEW ENGLAND COAST THURSDAY AND INTENSIFY SOUTHEAST OF CAPE COD LATE
IN THE DAY.$$

GULF OF MAINE...
...GALE WARNING IN EFFECT...
.WINDS NORTHWEST 35 TO 45 KNOTS BECOMING WEST 25 TO 35 KNOTS EARLY
TONIGHT..DIMINISHING LATE AT NIGHT. WIND BECOMING SOUTHEAST 10 TO 20
KNOTS THURSDAY. VISIBILITY VARIABLE TO LESS THAN 1 MILE IN SNOW
SQUALLS..ENDING TONIGHT. AVERAGE SEA 10 TO 20 FEET SUBSIDING TO 10
TO 15 FEET TONIGHT.$$

GEORGES BANK...FROM NORTHEAST CHANNEL TO GREAT SOUTH CHANNEL...OUT TO
ONE THOUSAND FATHOMS...
...GALE WARNING IN EFFECT...
.WINDS NORTHWEST 35 TO 45 KNOTS BECOMING WEST 25 TO 35 KNOTS EARLY
TONIGHT..DIMINISHING LATE AT NIGHT. SOUTHEAST 10 TO 20 KNOTS
THURSDAY.
VISIBILITY VARIABLE TO LESS THAN 1 MILE IN SNOW SQUALLS..ENDING
TONIGHT. CHANCE OF SNOW AGAIN ON THURSDAY.
AVERAGE SEA 10 TO 20 FEET THIS AFTERNOON..10 TO 15 FEET TONIGHT.$$

SOUTH OF NEW ENGLAND...FROM GREAT SOUTH CHANNEL TO AND INCLUDING
HUDSON CANYON...OUT TO ONE THOUSAND FATHOMS...
...GALE WARNING IN EFFECT...
.WINDS NORTHWEST 25 TO 35 KNOTS BECOMING WEST 20 TO 30 KNOTS EARLY
TONIGHT..DIMINISHING LATE AT NIGHT. SOUTH 10 TO 20 KNOTS
THURSDAY..SHIFTING TO NORTHWEST 20 TO 30 KNOTS LATE IN THE DAY.
VISIBILITY VARIABLE TO LESS THAN 1 MILE IN SNOW SQUALLS THIS
AFTERNOON. A CHANCE OF SNOW OR RAIN THURSDAY.
AVERAGE SEA 10 TO 15 FEET THIS AFTERNOON..5 TO 10 FEET TONIGHT.$$

SOUTH OF NOVA SCOTIA...FROM SABLE ISLAND TO NORTHEAST CHANNEL...OUT
TO ONE THOUSAND FATHOMS...
...STORM WARNING IN EFFECT...
.WIND NORTHWEST 45 TO 55 KNOTS THIS AFTERNOON..35 TO 45 KNOTS
TONIGHT. WEST 20 TO 30 KNOTS THURSDAY.
VISIBILITY VARIABLE TO LESS THAN 1 MILE IN SNOW SQUALLS THROUGH
TONIGHT.
AVERAGE SEA 10 TO 20 FEET THROUGH TONIGHT.$$

BTS
```

```
WBCLFPWBC
WOUS00 KWBC 160945 COR

DC AND VICINITY FORECAST ... CORRECTION
NATIONAL WEATHER SERVICE WASHINGTON DC
445 AM EST WED JAN 16 1985

DC01-DC AND VICINITY ... CORRECTION
445 AM EST WED JAN 16 1985

.TODAY...MOSTLY SUNNY. HIGHS NEAR 30. NORTHWEST WINDS 10 TO 15
MPH.
.TONIGHT...INCREASING CLOUDINESS WITH A 30 PERCENT CHANCE OF
LIGHT SNOW BY MORNING. LOWS IN MID 20S IN THE CITY AND IN THE
UPPER TEENS AND LOWER 20S BEYOND THE BELTWAY. WINDS LIGHT AND
VARIABLE.
.THURSDAY...CLOUDY WITH A 50 PERCENT CHANCE OF SNOW. HIGHS IN
MID TO UPPER 30S. SOUTHERLY WINDS 10 TO 15 MPH SHIFTING TO
NORTHWEST 10 TO 20 MPH DURING THE AFTERNOON.

$$

RER
```

Figure 2. Originals of the three products VID.DT (Figure 1) will be used for.

```
WBCOFFWBC
WOUS00 KWBC 161530

OFFSHORE WATERS FORECAST
NATIONAL WEATHER SERVICE WASHINGTON DC
1030 AM EST WED JAN 16 1985

WEST CENTRAL NORTH ATLANTIC WEST OF 65W NORTH OF 32N TO 40N
INCLUDING THE CONTINENTAL SHELF AND SLOPE WATERS TO 1000 FATHOMS

SYNOPSIS
.STORM CENTER JUST WEST OF NEWFOUNDLAND MOVING SLOWLY NORTH.
HIGH PRESSURE WILL MOVE EAST OFF THE COAST TONIGHT. LOW PRESSURE
DEVELOPING NEAR THE MID ATLANTIC COAST THURSDAY WILL INTENSIFY
AND MOVE TO THE NORTHEAST PART OF THE AREA BY EVENING.MM

...CONTINENTAL SHELF AND SLOPE WATERS TO 1000 FATHOMS...

HUDSON CANYON TO BALTIMORE CANYON
.NORTHWEST WINDS 20 TO 30 KNOTS DIMINISHING TO 15 TO 25 KNOTS
LATER TODAY. WINDS BECOMING VARIABLE 15 KNOTS OR LESS TONIGHT.
SOUTH WINDS 15 TO 25 KNOTS THURSDAY SHIFTING TO NORTHWEST 20 TO
30 KNOTS IN THE AFTERNOON. AVERAGE SEAS 6 TO 12 FEET SUBSIDING TO
4 TO 8 TONIGHT THEN INCREASING TO 5 TO 10 FEET THURSDAY. FAIR
THROUGH TONIGHT. SNOW DEVELOPING THURSDAY. VISIBILITY LESS THAN
A MILE AT TIMES IN THE SNOW OTHERWISE OVER OVER 5 MILES.MM

BALTIMORE CANYON TO HATTERAS CANYON
.NORTHWEST WINDS 20 TO 30 KNOTS DIMINISHING TO 15 TO 25 KNOTS
LATER TODAY. WINDS BECOMING VARIABLE 15 KNOTS OR LESS TONIGHT.
SOUTH WINDS 15 TO 25 KNOTS THURSDAY SHIFTING TO NORTHWEST 20 TO
30 KNOTS IN THE AFTERNOON. AVERAGE SEAS 6 TO 12 FEET SUBSIDING TO
4 TO 8 TONIGHT THEN INCREASING TO 5 TO 10 FEET THURSDAY. FAIR
THROUGH TONIGHT. SNOW DEVELOPING THURSDAY EXCEPT RAIN OVER
SOUTH PORTION. VISIBILITY LESS THAN A MILE AT TIMES IN THE
PRECIPITATION OTHERWISE OVER OVER 5 MILES.MM

HATTERAS CANYON TO BLAKE RIDGE
.NORTH WINDS 15 TO 25 KNOTS DIMINISHING TO 10 TO 20 KNOTS
LATER TODAY. VARIABLE WINDS 15 KNOTS OR LESS TONIGHT. SOUTH
WINDS 15 TO 25 KNOTS THURSDAY SHIFTING TO NORTHWEST 20 TO 30
KNOTS IN THE AFTERNOON. AVERAGE SEAS 5 TO 10 FEET SUBSIDING TO 3
TO 6 TONIGHT THEN INCREASING TO 5 TO 10 FEET THURSDAY. FAIR
WEATHER THROUGH TONIGHT. RAIN DEVELOPING THURSDAY. VISIBILITY
OVER 5 MILES LOWERING TO LESS THAN A MILE AT TIMES IN THE
PRECIPITATION.MM

...EAST OF 1000 FATHOMS...

NORTHEAST PORTION...
...GALE WARNING IN EFFECT...
NORTHWEST WINDS 25 TO 40 KNOTS DIMINISHING TO 10 TO 20 KNOTS
TONIGHT. WINDS BECOMING SOUTHWEST AND INCREASING TO 25 TO 40
KNOTS THURSDAY SHIFTING TO NORTHWEST 25 TO 35 KNOTS WEST OF 70W
IN THE AFTERNOON. AVERAGE SEAS 12 TO 20 FEET SUBSIDING TO 6 TO
12 FEET TONIGHT THEN INCREASING TO 8 TO 15 FEET THURSDAY.
SCATTERED RAIN OR SNOW SHOWERS AND SQUALLS DIMINISHING TONIGHT.
RAIN OR SNOW DEVELOPING THURSDAY. VISIBILITY OCCASIONALLY LESS
THAN 1 MILE IN PRECIPITATION.

SOUTHWEST PORTION
NORTHWEST WINDS 20 TO 30 KNOTS BECOMING NORTH AND DIMINISHING TO
10 TO 20 KNOTS LATER TODAY. VARIABLE WINDS 15 KNOTS OR LESS
TONIGHT. SOUTHWEST WINDS INCREASING TO 20 TO 30 KNOTS THURSDAY.
AVERAGE SEAS 8 TO 15 FEET SUBSIDING TO 4 TO 8 FEET TONIGHT THEN
INCREASING TO 5 TO 10 FEET THURSDAY. SCATTERED SHOWERS AND
SQUALLS TODAY. FAIR TONIGHT. RAIN DEVELOPING THURSDAY. VISIBILITY
OCCASIONALLY LESS THAN A MILE IN PRECIPITATION.MM

EXTENDED OUTLOOK
.FRIDAY THROUGH SUNDAY
LOW PRESSURE AND ASSOCIATED COLD FRONT MOVING OUT OF THE AREA
FRIDAY. A WEAK FRONT WILL PASS THROUGH THE AREA SATURDAY AND
SUNDAY.

MARINE WARNINGS FOR NON TROPICAL SYSTEMS...POSSIBLE GALE FRIDAY.MM

ERS
```

```
ERHWRKVID
-7703
\
NOAA/NATIONAL WEATHER SERVICE
FORECAST OFFICE BOSTON MA
OFFSHORE FORECAST
SABLE ISLAND TO NORTHEAST
CHANNEL
1000 AM EST WED JAN 16 1985

...STORM WARNING IN EFFECT...
.WIND NORTHWEST 45 TO 55 KNOTS
THIS AFTERNOON..35 TO 45 KNOTS
TONIGHT. WEST 20 TO 30 KNOTS
THURSDAY.
VISIBILITY VARIABLE TO LESS
THAN 1 MILE IN SNOW SQUALLS
THROUGH TONIGHT.
AVERAGE SEA 10 TO 20 FEET
\
THROUGH TONIGHT.$$
-7704
\
NOAA/NATIONAL WEATHER SERVICE
FORECAST OFFICE BOSTON MA
OFFSHORE FORECAST
GEORGES BANK FROM NORTHEAST
CHANNEL TO GREAT SOUTH CHANNEL
1000 AM EST WED JAN 16 1985

...GALE WARNING IN EFFECT...
.WINDS NORTHWEST 35 TO 45
KNOTS BECOMING WEST 25 TO 35
KNOTS EARLY
TONIGHT..DIMINISHING LATE AT
NIGHT. SOUTHEAST 10 TO 20
KNOTS THURSDAY.
VISIBILITY VARIABLE TO LESS
THAN 1 MILE IN SNOW
\
SQUALLS..ENDING TONIGHT.
CHANCE OF SNOW AGAIN ON
THURSDAY.
AVERAGE SEA 10 TO 20 FEET THIS
AFTERNOON..10 TO 15 FEET
TONIGHT.$$
-7706
\
OFFSHORE FORECAST
HUDSON COUNTY TO BALTIMORE
CANYON
1030 AM EST WED JAN 16 1985

.NORTHWEST WINDS 20 TO 30
KNOTS DIMINISHING TO 15 TO 25
KNOTS LATER TODAY. WINDS
BECOMING VARIABLE 15 KNOTS OR
LESS TONIGHT. SOUTH WINDS 15
TO 25 KNOTS THURSDAY SHIFTING
TO NORTHWEST 20 TO 30 KNOTS IN
THE AFTERNOON. AVERAGE SEAS 6
TO 12 FEET SUBSIDING TO 4 TO 8
TONIGHT THEN INCREASING TO 5
TO 10 FEET THURSDAY. FAIR
\
THROUGH TONIGHT. SNOW
DEVELOPING THURSDAY.
VISIBILITY LESS THAN A MILE AT
TIMES IN THE SNOW OTHERWISE
OVER OVER 5 MILES.MM
-7707
\
BALTIMORE CANYON TO
HATTERAS CANYON
1030 AM EST WED JAN 16 1985

.NORTHWEST WINDS 20 TO 30
KNOTS DIMINISHING TO 15 TO 25
KNOTS LATER TODAY. WINDS
BECOMING VARIABLE 15 KNOTS OR
LESS TONIGHT. SOUTH WINDS 15
TO 25 KNOTS THURSDAY SHIFTING
TO NORTHWEST 20 TO 30 KNOTS IN
THE AFTERNOON. AVERAGE SEAS 6
TO 12 FEET SUBSIDING TO 4 TO 8
TONIGHT THEN INCREASING TO 5
TO 10 FEET THURSDAY. FAIR
THROUGH TONIGHT. SNOW
\
DEVELOPING THURSDAY EXCEPT
RAIN OVER SOUTH PORTION.
VISIBILITY LESS THAN A MILE AT
TIMES IN THE PRECIPITATION
OTHERWISE OVER OVER 5 MILES.MM
-7708
\
HATTERAS CANYON TO
GLADE RIDGE
1030 AM EST WED JAN 16 1985

.NORTH WINDS 15 TO 25 KNOTS
DIMINISHING TO 10 TO 20 KNOTS
LATER TODAY. VARIABLE WINDS 15
KNOTS OR LESS TONIGHT. SOUTH
WINDS 15 TO 25 KNOTS THURSDAY
SHIFTING TO NORTHWEST 20 TO 30
KNOTS IN THE AFTERNOON.
AVERAGE SEAS 5 TO 10 FEET
SUBSIDING TO 3 TO 6 TONIGHT
THEN INCREASING TO 5 TO 10
FEET THURSDAY. FAIR WEATHER
THROUGH TONIGHT. RAIN
\
DEVELOPING THURSDAY.
VISIBILITY OVER 5 MILES
LOWERING TO LESS THAN A MILE
AT TIMES IN THE
PRECIPITATION.MM
-7710
\
DC AND VICINITY FORECAST
445 AM EST WED JAN 16 1985

.TODAY...MOSTLY SUNNY. HIGHS
NEAR 30. NORTHWEST WINDS 10 TO
15 MPH.
.TONIGHT...INCREASING
CLOUDINESS WITH A 30 PERCENT
CHANCE OF LIGHT SNOW BY
MORNING. LOWS IN MID 20S IN
THE CITY AND IN THE UPPER
TEENS AND LOWER 20S BEYOND THE
BELTWAY. WINDS LIGHT AND
VARIABLE.
.THURSDAY...CLOUDY WITH A 50
PERCENT CHANCE OF SNOW. HIGHS
\
IN MID TO UPPER 30S. SOUTHERLY
WINDS 10 TO 15 MPH SHIFTING TO
NORTHWEST 10 TO 20 MPH DURING
THE AFTERNOON.

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Figure 3. VIDTEX output using VID.DT in Figure 1 and products in Figure 2 (all defaults except output location)

VI. Source Listings.

```
C
C     DECEMBER 1984        RIGDON, G.          WSFO WASHINGTON DC
C                                              FTS 763-8088
C     FORTRAN IV
C     DG ECLIPSE(S230)       RDOS/REV 7.20
C
C     LOAD LINE: RLDR VIDTEX PVREAD RDSWV NCURJT RDT WRTERR IASC ZDTG
C                COMP RDWRT WRTS (TOP BG UTIL FORT).LB
C
C     PURPOSE: THIS PROGRAM TAKES AN AFOS MESSAGE OF UP TO 80 CHARACTERS
C     PER LINE AND TRANSFORMS IT INTO VIDEOTEX FORMAT (NORMALLY 32
C     CHARACTERS PER LINE AND 16 LINES PER PAGE). THESE PARAMETERS ARE
C     ADJUSTABLE.
C
      COMMON/TRSH/IHDR(10),IHED(10),IUPT(80),ICMP(8),IPG(3),LCT,IEN(3),
     CIOPT(8),IDOC(10),ID1(5),ID2(5),ID3(5),ID4(5),ID5(5),ILOC(5),ISK(2)
      COMMON/QARDQ/IOUTU(80),KK,IBFU(257),KREC(20),IC,IREC
      DIMENSION IOUT(40),IUP(80),IDATE(3),INMUP(80),IZN(4),IAR(6),KRECU(40)
      DATA IHED/'WOUS00 K--- ------',6412K/
      ID=0
      IMSG=0
      IBL=6412K
      CALL RDSWV (NN,L,ISTP,IPL,LLN,IST,IHD,IE,ICOMP,NPD,TIM);READS SWITCHES
      CALL DELETE ('VID.SC',IER)
      CALL CRAND ('VID.SC',IER)
      CALL GCHN (ICHN1,IER)              ; FIND AND OPEN CHANNEL FOR
      CALL OPEN (ICHN1,'VID.SC',2,IER)       ; WRITING TO 'VID.SC'
      CALL WRS (ICHN1,IHDR,20,IER)     ; WRITE FSTORE HEADER
      IF (IOPT(7).EQ.0.AND.IOPT(6).EQ.0)GOTO 40 ; IF NO WOUS HDR OR ERROR MSG
      IF (IOPT(6).EQ.1)CALL NCURJT (CURJT,IDATE,IHR); CURRENT JULIAN TIME
      CALL ZDTG (IAR)          ;=============================================
      CALL PACK (IAR,6,IOUT)             ; CREATE AND WRITE WOUS HEADER USING
      DO 20 I=1,3                        ; STATION ID FROM SKEL FILE AND SYSTEM
   20 IHED(I+6)=IOUT(I)                  ; TIME
      IHED(5)=ISK(1)
      IHED(6)=ISK(2)+40K
      IF (IOPT(7).EQ.1)CALL WRS (ICHN1,IHED,20,IER)  ;=======================
   40 IF (IOPT(1).EQ.0)GOTO 380          ; IF NO DATA FILE IS USED
      CALL RDT (ICHN2,INMUP)       ;=====================================
      DO 100 I=1,4
  100 IZN(I)=40K
      ICT=1
  120 ID=ID+1
      IF(ID.EQ.1)CALL PVREAD (1,ID1,$300,$300,1)   ; 1ST INPUT LOCATION
      IF(ID.EQ.2)CALL PVREAD (1,ID2,$300,$300,1)   ; 2ND INPUT LOCATION
      IF(ID.EQ.3)CALL PVREAD (1,ID3,$300,$300,1)   ; 3RD INPUT LOCATION
      IF(ID.EQ.4)CALL PVREAD (1,ID4,$300,$300,1)   ; 4TH INPUT LOCATION
      IF(ID.EQ.5)CALL PVREAD (1,ID5,$300,$300,1)   ; 5TH INPUT LOCATION
      IF(IOPT(6).EQ.0)GOTO 130      ; IF NO ERROR MESSAGE IS NEEDED
      CALL UNPACK (KREC,40,KRECU)          ;=================================
      XNUM1=KRECU(19)*(2.**14)             ; FIND THE JULIAN TIME OF PRODUCT
      XNUM2=KRECU(20)*(2.**7)              ; AND WRITE ERROR MESSAGE IF TOO
      PRODJT=XNUM1+XNUM2+KRECU(21)         ; OLD
      DIF=CURJT-PRODJT                     ;
      IF (DIF.GT.TIM)CALL WRTERR(ICHN3,IMSG,ID,5)
  130 DO 140 I=1,6                  ;=====================================
      CALL PVREAD (2,IOUT,$200,$300)               ; READ LINE BY LINE TO
      CALL UNPACK (IOUT,80,IUP)                    ; FIND TIME LINE OF MASS
      IF (IUP(1).GE.60K.AND.IUP(1).LE.71K)GOTO 160; MEDIA HEADER. IF NONE
  140 CONTINUE                                     ; FOUND IN FIRST SIX
```

```
    GOTO 200                                    ; LINES USE BLANK LINE
160 DO 180 I=1,80
180 IUPT(I)=IUP(I)
    GOTO 240
200 DO 220 I=1,80
220 IUPT(I)=40K    ;=================================================
240 LCT=0                          ; FIND NEXT /$ FOR MATCHING IN COMP
    DO 260 I=1,4                   ; SUBROUTINE
    IZN(I)=INMUP(ICT)
    ICT=ICT+1
    IF (INMUP(ICT).EQ.57K.OR.INMUP(ICT).EQ.15K.OR.INMUP(ICT).EQ.40K)GOTO 280
260 CONTINUE   ;=================================================
280 CALL COMP (ICHN1,ICHN2,IZN,K,NN,IPL,ICOMP,$310);SEARCH 'VID.DT'
290 IF (K.EQ.2)CALL RDWRT(ICHN1,ICHN2,NN,ISTP,IPL,LLN,IST,IHD,NPO,$320,$330)
295 IF (INMUP(ICT).EQ.15K.OR.INMUP(ICT).EQ.40K)GOTO 360
    GOTO 240
300 IF (IOPT(1).EQ.0) CALL FORKE (ID1,'PLS RE-STORE',IER)
    IF (IOPT(6).EQ.0)GOTO 340 ; IF MESSAGE FOR MISSING LOCS. NOT WANTED
    CALL WRTERR (ICHN3,IMSG,ID,1)   ;=================================
    GOTO 340                       ; WRITE ERROR MESSAGES
310 CALL WRTERR (ICHN3,IMSG,ID,2)
    GOTO 290
320 CALL WRTERR (ICHN3,IMSG,ID,3)
    GOTO 295
330 CALL WRTERR (ICHN3,IMSG,ID,4)
    GOTO 295                       ; =================================
340 IF (IOPT(1).EQ.0)GOTO 460
    ICT=ICT+1
    IF (INMUP(ICT).EQ.15K.OR.INMUP(ICT).EQ.40K)GOTO 360
    GOTO 340
360 ICT=ICT+1
    IF(ID.NE.IOPT(4))GOTO 120
    GOTO 400
380 IF (IOPT(3).EQ.1)CALL WRS (ICHN1,IDOC,L,IER) ; WRITE DOCUMENT #
    IF (IOPT(2).EQ.0)CALL WRS (ICHN1,IPG,NN,IER) ; WRITE PAGE SEPARATER
    CALL PVREAD (1,ID1,$300,$300,1)              ; OPEN AFOS LOCATION
    CALL RDWRT (ICHN1,ICHN2,NN,ISTP,IPL,LLN,IST,IHD) ; BEGIN WRITING
400 IF (IOPT(8).EQ.1)CALL WRS (ICHN1,IEN,IE,IER)   ; WRITE END DOCUMENT CODE
    WRITE (ICHN1,420)
420 FORMAT (1X,'(12)(203)')
    CALL CLOSE (ICHN1,IER)
    CALL USTOR ('VID.SC',IER)
    CALL FORKP ('VIDTEX',ILOC,IER)
460 IF (IMSG.EQ.1)WRITE (ICHN3,420)
    IF (IMSG.EQ.1)CALL CLOSE (ICHN3,IER)
    IF (IMSG.EQ.1)CALL USTOR('VIDTEXMSG',IER)
    CALL DELETE ('VID.SC',IER)
    CALL DELETE ('VIDTEXMSG',IER)
    CALL EXIT
    END
```

```
C
C     DECEMBER 1984        ADAPTED FROM                 WSFO WASHINGTON DC
C                          AFREAD.FR -                  FTS 763-8068
C                          MAT PEROUTKA
C
C     FORTRAN IV
C     DG ECLIPSE (S230)              RDOS/REV 7.20
C
C
C     ================================================================
C     ===  THIS SUBROUTINE IS AN UPDATED VERSION OF THE AFREAD SUBROUTINE ===
C     ===  WRITTEN BY MAT PEROUTKA. IT DOES THE SAME THINGS AS AFREAD BUT ===
C     ===  WILL ALLOW YOU TO READ PREVIOUS VERSIONS..IT ALSO PLACES THE   ===
C     ===  LINE WHERE THE 203 (END OF FILE) IS FOUND IN THE IOUT ARRAY.   ===
C     ===  WHEN OPTION 1 IS USED..ELEMENT 5 IN THE CALL TO THE SUBROUTINE ===
C     ===  IS THE NUMBER OF VERSIONS TO BE READ. OPTION 4 CAN BE USED     ===
C     ===  INSTEAD OF OPTION 1. OPTION 4 ALLOWS YOU TO READ THE ROUTING   ===
C     ===  CODES AND THE WOUS HEADER IN THE FIRST READ USING OPTION 2.    ===
C     ================================================================
C
C
      SUBROUTINE PVREAD (IOPT,IOUT,IEND,IERR,M)
      COMMON/QARDQ/IOUTU(30),I,IBFU(257),KREC(20),IC,IREC
      DIMENSION IOUT(40),IBFP(128)
      GOTO (100,600,300,100)IOPT
  100 CALL KSRCF (IOUT,KREC,IER)
      IC=1
      IF (IER.NE.1) RETURN IEND
      IREC=M
      GOTO 300
  200 CALL PRVRF(IER)
      IC=IC+1
      IF (IER.NE.1) RETURN IEND
  300 CALL RDBKF (0,IBFP,IER)
      IF (IER.NE.1) RETURN IEND
      CALL UNPACK (IBFP,256,IBFU)
      I=5
  600 II=1
      DO 625 J=1,80
  625 IOUTU(J)=40K
  650 IF (I.LE.256)GOTO 700
      CALL NXBKF (IBFP,IER)
      IF (IER.NE.1) RETURN IERR
      CALL UNPACK (IBFP,256,IBFU)
      I=5
  700 IF (IBFU(I).EQ.203K)GOTO 775
      IF (IBFU(I).EQ.15K)GOTO 800
      IF (IBFU(I).EQ.12K)GOTO 750
      IF (IBFU(I-1).EQ.200K.AND.IOPT.EQ.4)GOTO 880
      IF (II.GE.81)GOTO 875
      IOUTU(II)=IBFU(I)
      II=II+1
  750 I=I+1
      GOTO 650
  775 IF (IREC.EQ.IC) GOTO 840
      GOTO 200
  800 IF (I.LT.256)GOTO 825
      CALL NXBKF (IBFP,IER)
      IF (IER.NE.1) RETURN IERR
      CALL UNPACK (IBFP,256,IBFU)
```

```
      IBFU(4)=15K
      I=4
825 IF (IBFU(I+1).EQ.12K)GOTO 850
      I=I+1
      GOTO 650
840 IF (IOPT.EQ.2) CALL PACK(IOUTU,80,IOUT)
      RETURN !END
850 I=I+2
875 IF (IOPT.EQ.2) CALL PACK(IOUTU,80,IOUT)
880 RETURN
      END
```

```
C
C     OCTOBER 1984        RIGDON, B.        WSFO WASHINGTON DC
C                                           FTS 763-8088
C
C     FORTRAN IV
C     DG ECLIPSE(S230)      RDOS/REV 7.20
C
C   ================================================================
C   ===                                                          ===
C   ===  THIS SUBROUTINE READS THE SWITCHES THAT INPUT DATA INTO THE  ===
C   ===                    VIDTEX PROGRAM                        ===
C   ===                                                          ===
C   ================================================================
C
C
      SUBROUTINE RDSWV (NN,L,ISTP,IPL,LLN,IST,IHD,IE,ICOMP,NPD,TIM)
      COMMON/TRSH/IHDR(10),IHED(10),IUPT(80),ICMP(8),IPG(3),LCT,IEN(3),
     CIOPT(8),IDOC(10),ID1(5),ID2(5),ID3(5),ID4(5),ID5(5),ILOC(5),ISK(2)
      INTEGER DAT(7),SW(2),IDATU(14),IHDRU(20)
      DATA IHDR/'VIDEOTEX 000',177777K,177777K,'30','(305)(200)'/
      DATA IPG/56015K,5000K/
      NN=3
      ISTP=22115K     ; DEFAULT FOR CUTOFF CODES '$M'
      IPL=16          ; DEFAULT PAGE LENGTH
      LLN=31          ; DEFAULT LINE LENGTH MINUS ONE
      IST=2           ; DEFAULT FOR FIRST PAGING CHAR. WHEN USING 'VID.DT'
      IHD=50    ; DEFAULT SETTING FOR LINE LENGTH THAT SHOULD END PAR.
      ICOMP=6   ; DEFAULT SETTING FOR # OF CHAR/2 FOR COMPARISON USING 'B'
      NPD=7     ; DEFAULT SETTING FOR # OF LINES CHECKED FOR .
      TIM=360.  ; DEFAULT TIME IN MINUTES FOR OLD PRODUCTS
      DO 20 I=1,8
   20 IOPT(I)=0
      CALL UNPACK (IHDR,20,IHDRU)
      CALL GCHN (ICHN4,IER)
      CALL OPEN (ICHN4,'SKEL',2,IER)
      CALL RDS (ICHN4,ISK,4,IER)
      CALL UNPACK (ISK,4,IDATU)
      DO 30 I=1,3
   30 IHDRU(I+9)=IDATU(I)
      CALL FCOM (IS,IER)          ;=====================================
   40 CALL COMCM (IS,DAT,N,SW,IER)      ; READ SWITCHES
      IF (IER.EQ.9)GOTO 420
      IF (ISWSE(SW,'I'))GOTO 60         ; INPUT AFOS LOCATIONS
      IF (ISWSE(SW,'N'))GOTO 380        ; DOCUMENT NUMBER
      IF (ISWSE(SW,'B'))IOPT(1)=1       ; OPTION TO USE 'VID.DT' FILE
      IF (ISWSE(SW,'P'))GOTO 360        ; PAGE SEPARATER
      IF (ISWSE(SW,'O'))GOTO 260        ; SET OUTPUT LOCATION
      IF (ISWSE(SW,'A'))GOTO 300        ; SET ADDRESSING
      IF (ISWSE(SW,'D'))GOTO 340        ; SET PRIORITY OF MESSAGE
      IF (ISWSE(SW,'L'))IPL=IASC(1,N-1,DAT)    ; SET PAGE LENGTH
      IF (ISWSE(SW,'C'))LLN=IASC(1,N-1,DAT)-1  ; SET LINE LENGTH
      IF (ISWSE(SW,'X'))IOPT(5)=1              ; NO CUTOFF CODE
      IF (ISWSE(SW,'E'))ISTP=DAT(1)            ; OPTIONAL CUTOFF CODES
      IF (ISWSE(SW,'W'))IOPT(7)=1              ; PRODUCE WOUS HEADER
      IF (ISWSE(SW,'S'))IST=IASC(1,N-1,DAT) ; RESET PAGE BEGIN CHAR WITH 'B'
      IF (ISWSE(SW,'T'))TIM=IASC(1,N-1,DAT) ; RESET TIME FOR OLD PRODUCT
      IF (ISWSE(SW,'K'))NPD=IASC(1,N-1,DAT) ; RESET # OF LINES FOR MSG .
      IF (ISWSE(SW,'H'))IHD=IASC(1,N-1,DAT) ; RESET LINE LENGTH FOR END PAR.
      IF (ISWSE(SW,'M'))IOPT(6)=1       ; PRODUCE MESSAGE FOT LOC. NOT READ
      IF (ISWSE(SW,'F'))GOTO 400        ; END OF MESSAGE CHARACTER
```

```
      IF (ISUBE(SW,'B'))ICOMP=IASC(1,N-1,DAT)/2  ; SET COMPARISON LENGTH
      IF (ISUBE(SW,'J'))IOPT(2)=1        ; NO PAGE SEPARATERS
      GOTO 40
   60 IF (N.LE.9)DAT(5)=20000K           ;=================================
      IF (N.EQ.8)DAT(4)=DAT(4)+40K       ; READ IN AFOS INPUT LOCATIONS
      DO 80 I=1,5                        ;
   80 ID1(I)=DAT(I)                      ;
      GOTO 40                            ;=================================
  260 IF (N.LE.9)DAT(5)=20000K           ; READ IN AFOS OUTPUT LOCATION
      IF (N.EQ.8)DAT(4)=DAT(4)+40K       ; AND PLACE IN FSTORE HEADER
      CALL UNPACK (DAT,10,IDATU)         ;
      DO 280 I=1,9                       ;
  280 IHDRU(I)=IDATU(I)                  ;
      GOTO 40                            ;=================================
  300 IF (N.LE.3)DAT(2)=20000K           ; READ IN ADDRESSEE AND PLACE IN
      IF (N.EQ.2)DAT(1)=DAT(1)+40K       ; FSTORE HEADER
      CALL UNPACK (DAT,4,IDATU)          ;
      DO 320 I=1,3                       ;
  320 IHDRU(I+9)=IDATU(I)                ;
      GOTO 40                            ;=================================
  340 CALL UNPACK (DAT,2,IDATU)          ; READ IN PRIORITY AND PLACE IN
      IHDRU(17)=IDATU(1)                 ; FSTORE HEADER
      GOTO 40                            ;=================================
  360 CALL UNPACK (DAT,N,IDATU)          ; READ IN PAGE SEPARATER
      IDATU(N)=15K                       ;
      IDATU(N+1)=12K                     ;
      IDATU(N+2)=0K                      ;
      NN=N+1                             ;
      CALL PACK (IDATU,NN,IPG)           ;
      GOTO 40                            ;=================================
  380 IOPT(3)=1                          ;=================================
      CALL UNPACK (DAT,N,IDATU)          ; READ IN DOCUMENT NUMBER
      IDATU(N)=15K                       ;
      IDATU(N+1)=12K                     ;
      IDATU(N+2)=0K                      ;
      L=N+1                              ;
      CALL PACK (IDATU,L,IDOC)           ;
      GOTO 40                            ;=================================
  400 IOPT(8)=1                          ; READ IN END OF MESSAGE CHARACTER
      CALL UNPACK (DAT,N,IDATU)          ;
      IDATU(N)=15K                       ;
      IDATU(N+1)=12K                     ;
      IDATU(N+2)=0K                      ;
      IE=N+1                             ;
      CALL PACK (IDATU,IE,IEN)           ;
      GOTO 40                            ;=================================
  420 CALL PACK (IHDRU,9,ILOC)
      CALL PACK (IHDRU,20,IHDR)
      RETURN
      END
```

```
C
C     NOVEMBER 1984      ADAPTED FROM              WSFO WASHINGTON,DC
C                        CURJTIME.FR -             FTS 763-8000
C                        JACK MAY
C
C     FORTRAN IV
C     DG ECLIPSE (S230)          RDOS/REV 7.20
C
C     PURPOSE: CONVERTS SYSTEM TIME TO CURRENT JULIAN TIME IN MINUTES.
C
      SUBROUTINE NCURJT (CURJT,IDATE,IHR,ITIME)
      DIMENSION IDATE(3)
      REAL LYEAR
      CALL DATE (IDATE,IER)
      CALL FGTIM (IHR,MIN,ISEC)
      ITIME=IHR*60+MIN
C
C     TEST FOR LEAP YEAR...IF LEAPYEAR, LYEAR WILL =0
      LYEAR=(FLOAT(IDATE(3))/4.)-INT(FLOAT(IDATE(3))/4.)
C
      CURJT=0
      IF(IDATE(1).GE.2) CURJT=CURJT+44640.      ;ADD JAN MINUTES
      IF(IDATE(1).GE.3) CURJT=CURJT+40320.      ;ADD FEB MINUTES
      IF(LYEAR.EQ.0.AND.IDATE(1).GT.2) CURJT=CURJT+1440. ;ADD LEAP YEAR MINUTES
      IF(IDATE(1).GE.4) CURJT=CURJT+44640.      ;ADD MAR MINUTES
      IF(IDATE(1).GE.5) CURJT=CURJT+43200.      ;ADD APR MINUTES
      IF(IDATE(1).GE.6) CURJT=CURJT+44640.      ;ADD MAY MINUTES
      IF(IDATE(1).GE.7) CURJT=CURJT+43200.      ;ADD JUN MINUTES
      IF(IDATE(1).GE.8) CURJT=CURJT+44640.      ;ADD JUL MINUTES
      IF(IDATE(1).GE.9) CURJT=CURJT+44640.      ;ADD AUG MINUTES
      IF(IDATE(1).GE.10) CURJT=CURJT+43200.     ;ADD SEP MINUTES
      IF(IDATE(1).GE.11) CURJT=CURJT+44640.     ;ADD OCT MINUTES
      IF(IDATE(1).GE.12) CURJT=CURJT+43200.     ;ADD NOV MINUTES
C
      CURJT=CURJT+(IDATE(2)-1)*1440.            ;ADD DAYS SINCE LAST MONTH
      CURJT=CURJT+(IHR*60.)                     ;ADD # OF HRS SINCE MIDNIGHT
      CURJT=CURJT+FLOAT(MIN)                    ;ADD MINUTES
      IF(ISEC.GE.30) CURJT=CURJT+1.             ;ROUND OFF MINUTES
      RETURN
      END
```

```
C
C    OCTOBER 1984        RIGDON, B.        WSFO WASHINGTON DC
C                                          FTS 763-8088
C
C
C    FORTRAN IV
C    DG ECLIPSE(S230)      RDOS/REV 7.20
C
C   ================================================================
C   ===                                                          ===
C   ===  THIS SUBROUTINE READS THE 'VID.DT' FILE FOR INPUT LOCATIONS  ===
C   ===                                                          ===
C   ================================================================
C
C
      SUBROUTINE RDT (ICHN2,INMUP)
      COMMON/TRSH/IHDR(10),IHED(10),IUPT(80),ICMP(8),IPG(3),LCT,IEN(3),
     CIOPT(8),IDOC(10),ID1(5),ID2(5),ID3(5),ID4(5),ID5(5)
      DIMENSION INM(40),INMUP(80)
      CALL GCHN (ICHN2,IER)      ;=====================================
      CALL OPEN (ICHN2,'VID.DT',2,IER)    ; OPEN CHANNEL AND READ LINES FROM
   60 CALL RDL (ICHN2,INM,N,IER)         ; 'VID.DT' UNTIL LINE BEGINNING
      CALL UNPACK (INM,80,INMUP)          ; WITH '/' IS FOUND
      IF (INMUP(1).EQ.57K)RETURN
      IOPT(4)=IOPT(4)+1                 ;=================================
      IF (N.LE.9)INM(5)=20000K          ; READ IN AFOS INPUT LOCATIONS
      IF (N.EQ.8)INM(4)=INM(4)+23K      ;
      IF (IOPT(4).EQ.2)GOTO 100         ;
      IF (IOPT(4).EQ.3)GOTO 140         ;
      IF (IOPT(4).EQ.4)GOTO 180         ;
      IF (IOPT(4).EQ.5)GOTO 220         ;
      DO 80 I=1,5                       ;
   80 ID1(I)=INM(I)                     ;
      GOTO 60                           ;
  100 DO 120 I=1,5                      ;
  120 ID2(I)=INM(I)                     ;
      GOTO 60                           ;
  140 DO 160 I=1,5                      ;
  160 ID3(I)=INM(I)                     ;
      GOTO 60                           ;
  180 DO 200 I=1,5                      ;
  200 ID4(I)=INM(I)                     ;
      GOTO 60                           ;
  220 DO 240 I=1,5                      ;
  240 ID5(I)=INM(I)                     ;
      GOTO 60                           ;=================================
      RETURN
      END
```

```
C
C    OCTOBER 1984        RIGDON, G.        WSFO WASHINGTON DC
C                                          FTS 763-8088
C
C    FORTRAN IV
C    DG ECLIPSE(S230)      RDOS/REV 7.20
C
C    ================================================================
C    ===                                                          ===
C    ===    THIS SUBROUTINE WRITES A MESSAGE THAT CONTAINS ERRORS OR  ===
C    ===           POSSIBLE ERRORS FOUND DURING PROCESSING        ===
C    ===                                                          ===
C    ================================================================
C
C
     SUBROUTINE WRTERR (ICHN3,IMSG,ID,M)
     COMMON/TRSH/IHDR(10),IHED(10),IUPT(80),ICMP(3),IPG(3),LCT,IEN(3),
    CIOPT(8),IDOC(10),ID1(5),ID2(5),ID3(5),ID4(5),ID5(5),ILOC(5),ISK(2)
     COMMON/VIDMSG/MSSG(85),IERR1(20),IERR2(19),IERR3(16),IERR4(21),IERR5(8),
    CMHDR(10)
     DATA IERR1/'COULD NOT READ...PLEASE RE-STORE PRODUCT'/,
    CIERR2/'COULD NOT MATCH HEADING...CHECK FORMAT'/,
    CIERR3/'PERIOD (.) MISSING AFTER HEADING'/,
    CIERR4/'PERIOD (.) POSSIBLY MISSING AFTER HEADING'/,
    CMHDR/'VIDTEXMSG000',177777K,177777K,'30','(30S)(200)'/
    CMSSG/6412K,'THE FOLLOWING ARE ERRORS OR POSSIBLE ERRORS DETECTED DURING',
    C' PROCESSING:',6412K,6412K,
    C' PRODUCT        HEADING              ERROR OR POSSIBLE ERROR',
    C6412K,6412K/,IERR5/'PRODUCT TOO OLD'/
     IF(IMSG.EQ.1)GOTO 10  ;==============================
     CALL GCHN (ICHN3,IER)                ; OPEN CHANNNEL AND PREPARE
     CALL OPEN (ICHN3,'VIDTEXMSG',2,IER)  ; MESSAGE OF LOCATIONS THAT COULD
     CALL WRS (ICHN3,MHDR,20,IER)         ; NOT BE READ AND PROCESSED
     CALL WRS (ICHN3,IHED,20,IER)         ; OR THAT MAY CONTAIN ERRORS
     CALL WRS (ICHN3,MSSG,141,IER)        ;
     IMSG=1                               ;==============================
  10 IF(M.EQ.2)GOTO 100
     IF(M.EQ.3)GOTO 200
     IF(M.EQ.4)GOTO 300
     IF(M.EQ.5)GOTO 400
     IF (ID.EQ.1.OR.IOPT(1).EQ.0)WRITE (ICHN3,50)ID1,IERR1 ;==================
     IF (ID.EQ.2)WRITE (ICHN3,50)ID2,IERR1    ; CANNOT OPEN AFOS LOCATION
     IF (ID.EQ.3)WRITE (ICHN3,50)ID3,IERR1    ;
     IF (ID.EQ.4)WRITE (ICHN3,50)ID4,IERR1    ;
     IF (ID.EQ.5)WRITE (ICHN3,50)ID5,IERR1    ;
  50 FORMAT (/1X,'(12)',5A2,24X,20A2)         ;
     GOTO 600                                 ; ============================
 100 IF (ID.EQ.1)WRITE (ICHN3,150)ID1,ICMP,IERR2  ; CANNOT MATCH HEADING IN
     IF (ID.EQ.2)WRITE (ICHN3,150)ID2,ICMP,IERR2  ; VID.DT FILE WITH THAT IN
     IF (ID.EQ.3)WRITE (ICHN3,150)ID3,ICMP,IERR2  ; PRODUCT
     IF (ID.EQ.4)WRITE (ICHN3,150)ID4,ICMP,IERR2  ;
     IF (ID.EQ.5)WRITE (ICHN3,150)ID5,ICMP,IERR2  ;
 150 FORMAT (/1X,'(12)',5A2,4X,8A2,4X,19A2)       ;
     GOTO 600                                 ; ============================
 200 IF (ID.EQ.1)WRITE (ICHN3,250)ID1,ICMP,IERR3  ; LINE BEGINNING WITH
     IF (ID.EQ.2)WRITE (ICHN3,250)ID2,ICMP,IERR3  ; PERIOD MISSING AFTER
     IF (ID.EQ.3)WRITE (ICHN3,250)ID3,ICMP,IERR3  ; HEADING
     IF (ID.EQ.4)WRITE (ICHN3,250)ID4,ICMP,IERR3  ;
     IF (ID.EQ.5)WRITE (ICHN3,250)ID5,ICMP,IERR3  ;
 250 FORMAT (/1X,'(12)',5A2,4X,8A2,4X,16A2)       ;
```

```
    GOTO 600                                    ; ======================
300 IF (ID.EQ.1)WRITE (ICHN3,350)ID1,ICMP,IERR4 ; LINE BEGINNING WITH
    IF (ID.EQ.2)WRITE (ICHN3,350)ID2,ICMP,IERR4 ; PERIOD POSSIBLY MISSING
    IF (ID.EQ.3)WRITE (ICHN3,350)ID3,ICMP,IERR4 ; AFTER HEADING
    IF (ID.EQ.4)WRITE (ICHN3,350)ID4,ICMP,IERR4 ;
    IF (ID.EQ.5)WRITE (ICHN3,350)ID5,ICMP,IERR4 ;
350 FORMAT (/1X,'(12)',5A2,4X,8A2,4X,21A2)      ;
    GOTO 600                                    ; ----------------------
400 IF (ID.EQ.1)WRITE (ICHN3,450)ID1,IERR5      ; PRODUCT TOO OLD
    IF (ID.EQ.2)WRITE (ICHN3,450)ID2,IERR5      ;
    IF (ID.EQ.3)WRITE (ICHN3,450)ID3,IERR5      ;
    IF (ID.EQ.4)WRITE (ICHN3,450)ID4,IERR5      ;
    IF (ID.EQ.5)WRITE (ICHN3,450)ID5,IERR5      ;
450 FORMAT (/1X,'(12)',5A2,24X,8A2)             ; ----------------------
600 RETURN
    END
```

```
C
C     SEPTEMBER 1984     ADAPTED FROM                 USFO WASHINGTON,DC
C                        INTCVT.FR -                  FTS 763-6008
C                        MATT PEROUTKA
C                        WRCP #23
C
C     FORTRAN IV
C     DG ECLIPSE (S230)          RDOS/REV 7.20
C
C     PURPOSE: CONVERTS ASCII TO INTEGER.
C
C
C
      INTEGER FUNCTION IASC (IBGN,N,IDAT)
      DIMENSION IOUTU (80),IDAT (40)
      LOGICAL NEG
      IASC=0
      NEG=.FALSE.
      IEND=IBGN+N-1
      CALL UNPACK (IDAT,80,IOUTU)
  100 IF (IOUTU(IEND).NE.32)GOTO 200
      IF (IEND.EQ.IBGN)RETURN
      IEND=IEND-1
      GOTO 100
  200 DO 250 I=IBGN,IEND
      IF (IOUTU(I).NE.32)GOTO 300
  250 CONTINUE
      RETURN
  300 IF (IOUTU(I).EQ.43)GOTO 400
      IF (IOUTU(I).NE.45)GOTO 500
      NEG= .TRUE.
  400 I=I+1
  500 J=I
      DO 600 I=J,IEND
      IF (IOUTU(I).EQ.32)IOUTU(I)=48
      IF (IOUTU(I).LT.48.OR.IOUTU(I).GT.57)GOTO 800
      IASC=IASC*10+IOUTU(I)-48
  600 CONTINUE
      IF (NEG) IASC=-IASC
  800 RETURN
      END
```

```
C
C     OCTOBER 1984          RIGDON, G.          WSFO WASHINGTON DC
C                                               FTS 763-8088
C
C     FORTRAN IV
C     DG ECLIPSE(S230)      RDOS/REV 7.20
C
C     ================================================================
C     ===  THIS SUBROUTINE GETS SYSTEM TIME AND CONVERTS IT TO UNPACKED ===
C     ===  ASCII FOR WMO HEADER.                                      ===
C     ================================================================
C
C
      SUBROUTINE ZDTG (ITIM)
      DIMENSION ITIM(6),IAR(3)
      CALL DATE (IAR,IER)
      ICHNG=IAR(2)
      ICHK=1
      GOTO 100
   10 CALL FGTIM (IHR,IMIN,ISEC)
      ICHNG=IHR
      ICHK=3
      GOTO 100
   20 ICHNG=IMIN
      ICHK=5
  100 IF (ICHNG.GT.49)GOTO 150
      IF (ICHNG.GT.39)GOTO 140
      IF (ICHNG.GT.29)GOTO 130
      IF (ICHNG.GT.19)GOTO 120
      IF (ICHNG.GT.9)GOTO 110
      ITIM(ICHK)=60K
      ITIM(ICHK+1)=ICHNG+60K
      GOTO 200
  110 ITIM(ICHK)=61K
      ITIM(ICHK+1)=ICHNG-10+60K
      GOTO 200
  120 ITIM(ICHK)=62K
      ITIM(ICHK+1)=ICHNG-20+60K
      GOTO 200
  130 ITIM(ICHK)=63K
      ITIM(ICHK+1)=ICHNG-30+60K
      GOTO 200
  140 ITIM(ICHK)=64K
      ITIM(ICHK+1)=ICHNG-40+60K
      GOTO 200
  150 ITIM(ICHK)=65K
      ITIM(ICHK+1)=ICHNG-50+60K
  200 IF (ICHK.EQ.1)GOTO 10
      IF (ICHK.EQ.3)GOTO 20
      RETURN
      END
```

```
C
C     OCTOBER 1984        RIGDON, G.        WSFO WASHINGTON DC
C                                           FTS 763-8088
C
C     FORTRAN IV
C     DG ECLIPSE(S230)      RDOS/REV 7.20
C
C
C
C    ================================================================
C    ===                                                          ===
C    ===    THIS SUBROUTINE COMPARES LINES FROM AFOS PRODUCT WITH THAT    ===
C    ===     OF 'VID.DT'.' IF MATCH IS FOUND WRITES LINES FROM 'VID.DT'    ===
C    ===                                                          ===
C    ================================================================
C
C
      SUBROUTINE COMP (ICHN1,ICHN2,IZN,K,NN,IPL,ICOMP,IERR)
      COMMON/TRSH/IHDR(10),IHED(10),IUPT(80),ICMP(8),IPG(3),LCT,IEN(3),
     CIOPT(8)
      DIMENSION INM(40),INMUP(80),IUP(80),IZN(4),IOUT(40)
      DATA ICMP/'                '/
      REWIND ICHN2
      K=0
      I8L=6412K
   20 DO 30 I=1,40
   30 INM(I)=20040K
   50 CALL RDL (ICHN2,INM,NB,IER)
      IF (IER.EQ.9)GOTO 280
      CALL UNPACK (INM,80,INMUP)
      IF (INMUP(1).NE.57K)GOTO 50
      DO 60 I=1,4
      IF (IZN(I).NE.INMUP(I))GOTO 260
   60 CONTINUE
      IF (K.GE.1)GOTO 100
      DO 80 I=1,ICOMP
   80 ICMP(I)=INM(I+5)
      K=1
      GOTO 20
  100 IF (K.EQ.2)GOTO 160
      CALL PVREAD (3,DUMMY,$280)
  120 CALL PVREAD (2,IOUT,$270,$280)
      DO 140 I=1,ICOMP
      IF (IOUT(I).NE.ICMP(I))GOTO 120
  140 CONTINUE
      K=2
  160 IF (INMUP(11).EQ.52K)GOTO 240
      DO 180 I=71,80
  180 IUP(I)=40K
      DO 200 I=1,70
  200 IUP(I)=INMUP(I+10)
      IF (LCT.LT.IPL)GOTO 220
      IF (IOPT(2).EQ.0)CALL WRS (ICHN1,IPG,NN,IER)
      LCT=0
  220 CALL WRTS (ICHN1,IUP)
      LCT=LCT+1
      GOTO 20
  240 CALL WRTS (ICHN1,IUPT)
      LCT=LCT+1
      GOTO 20
```

```
260 IF (K.EQ.0)GOTO 20
    CALL WRS (ICHN1,IBL,2,IER)
    LCT=LCT+1
    GOTO 280
270 RETURN IERR
280 RETURN
    END
```

```
C   ===    THIS SUBROUTINE WRITES LINES IN CORRECT LINE LENGTHS AND      ===
C   ===                    CORRECT PAGE LENGTH.                         ===
      SUBROUTINE RDWRT (ICHN1,ICHN2,NN,ISTP,IPL,LLN,IST,IHD,NPD,IER1,IER2)
      COMMON/TRSH/IHDR(10),IHED(10),IUPT(80),ICMP(3),IPG(3),LCT,IEN(3),
     CIOPT(8)
      DIMENSION IOUT(40),IBUF(160),IUP(80),IBUFW(80),IWRT(40),ISTPU(2)
      DO 20 I=1,160
   20 IBUF(I)=40K
      IBGN=0
      ILFT=0
      IPD=0
      LCT=LCT-IST
      L=0
      IFIN=0
      IDOL=0
      ICK=0
      JEND=0
      IBL=6412K
      CALL UNPACK (ISTP,2,ISTPU)  ; CUTOFF CODES
      IF (IOPT(1).EQ.0)LCT=0      ; IF NOT USING 'VID.DT'
      IF (IOPT(1).EQ.0)GOTO 60    ; IF NOT USING 'VID.DT'
   40 CALL PVREAD (2,IOUT,$450,$460)    ;==================================
      CALL UNPACK (IOUT,80,IUP)         ; LOOK FOR LINE THAT BEGINS WITH .
      IF (IUP(1).EQ.56K)GOTO 80
      ICK=ICK+1
      GOTO 40
   60 IF (JEND.EQ.1)GOTO 460
      CALL PVREAD (2,IOUT,$65,$460)
      GOTO 70
   65 JEND=1
   70 CALL UNPACK (IOUT,80,IUP)
      IF (IUP(1).EQ.56K.AND.ILFT.NE.0)IPD=1
      IF (IPD.EQ.1)GOTO 380             ;==================================
   80 DO 120 I=1,80                     ; FIND END OF LINE AND CHECK FOR
      II=81-I                           ; CUTOFF CODE
      IF (IUP(II).EQ.15K.OR.IUP(II).EQ.12K.OR.IUP(II).EQ.0K)IUP(II)=40K
      IF (IUP(II).EQ.203K)IUP(II)=40K
      IF (II.LT.2.OR.IOPT(5).EQ.1)GOTO 100
      IF (IUP(II).EQ.ISTPU(1).AND.IUP(II-1).EQ.ISTPU(1))IDOL=1
      IF (IUP(II).EQ.ISTPU(2).AND.IUP(II-1).EQ.ISTPU(2))IDOL=1
  100 IF (IUP(II).NE.40K)GOTO 160
  120 CONTINUE                          ;==================================
      IF (ILFT.NE.0)GOTO 380            ;CHECK FOR CHAR. FROM PREV. LINE
      IF (JEND.EQ.1)GOTO 460
      IF (LCT.LT.IPL)GOTO 140           ;CHECK LINES ON PAGE
      IF (IOPT(2).EQ.0)CALL WRS (ICHN1,IPG,NN,IER) ; WRITE PAGE SEPARATER
      LCT=0
  140 CALL WRS (ICHN1,IBL,2,IER)
      LCT=LCT+1
      GOTO 60
  160 IF (II.LT.IHD)IFIN=1          ; CHECK IF END PAR. LINE LENGTH
      DO 180 I=1,80                 ;=======================================
  180 IBUF(ILFT+I)=IUP(I)           ; ADD NEW LINE TO END OF PREVIOUS LINE
      IEND=ILFT+II                  ; DIVIDE UP AND WRITE TO FILE
  200 DO 220 I=1,LLN
      L=LLN+1-I
      IF (L.EQ.1)GOTO 340
      IF (IBUF(L).EQ.40K.AND.IBUF(L-1).NE.40K)GOTO 240
  220 CONTINUE
  240 DO 260 I=1,L
```

```
260 IBUFW(I)=IBUF(I)
    IBUFW(L)=15K
    IBUFW(L+1)=12K
    LL=L+1
    CALL PACK (IBUFW,LL,IWRT)
    IF (LCT.LT.IPL)GOTO 280
    IF (IOPT(2).EQ.0)CALL WRS (ICHN1,IPG,NN,IER)
    LCT=0
280 CALL WRS (ICHN1,IWRT,LL,IER)
    LCT=LCT+1
300 ILFT=IEND-L
    IBGN=L
    IF (ILFT.LE.1)GOTO 440
    DO 320 I=1,ILFT
320 IBUF(I)=IBUF(IBGN+I)
    IEND=ILFT
    IF (ILFT.GE.LLN)GOTO 200
    IF (IFIN.EQ.1.OR.IDOL.EQ.1)GOTO 380
    ILFT=ILFT+1
    IBUF(ILFT)=40K
    GOTO 60
340 DO 360 I=1,LLN
    L=I
    IF (IBUF(I).EQ.40K.AND.IBUF(I+1).NE.40K)GOTO 300
360 CONTINUE
    GOTO 300
380 IBUF(ILFT+1)=15K
    IBUF(ILFT+2)=12K
    LL=ILFT+2
    CALL PACK (IBUF,LL,IWRT)
    IF (LCT.LT.IPL)GOTO 400
    IF (IOPT(2).EQ.0)CALL WRS (ICHN1,IPG,NN,IER)
    LCT=0
400 CALL WRS (ICHN1,IWRT,LL,IER)        ;================================
    LCT=LCT+1
    IF (IDOL.EQ.1.OR.JEND.EQ.1)GOTO 460
    IF (IFIN.EQ.1.OR.IPD.EQ.1)GOTO 440
    IF (LCT.LT.IPL)GOTO 420
    IF (IOPT(2).EQ.0)CALL WRS (ICHN1,IPG,NN,IER)
    LCT=0
420 CALL WRS (ICHN1,IBL,2,IER)
440 IF (IDOL.EQ.1.OR.JEND.EQ.1)GOTO 460
    IFIN=0
    IBGN=0
    ILFT=0
    L=0
    IF (IPD.EQ.0)GOTO 60
    IPD=0
    GOTO 80
450 RETURN IER1
460 IF(ICK.GT.NPD)RETURN IER2
    RETURN
    END
```

```
C
C     OCTOBER 1984        RIGDON, G.        WSFO WASHINGTON DC
C                                           FTS 763-8088
C
C     FORTRAN IV
C     DG ECLIPSE(S230)      RDOS/REV 7.20
C
C     ================================================================
C     ===                                                          ===
C     ===    THIS SUBROUTINE FINDS THE END OF LINE AND WRITES TO FILE   ===
C     ===                                                          ===
C     ================================================================
C
C
      SUBROUTINE WRTS (ICHN1,IUP)
      DIMENSION IUP(80),IOUT(40)
      DO 10 I=1,78                    ;LOOK FOR END OF LINE
      II=80-I
      IF (IUP(79-I).EQ.15K.OR.IUP(79-I).EQ.12K.OR.IUP(79-I).EQ.0K)IUP(79-I)=40K
      IF (IUP(79-I).NE.40K)GOTO 100
   10 CONTINUE
      IOUT(1)=6412K             ;PUT CARRIAGE RETURN AND LINE FEED
      N=2
      GOTO 110
  100 IUP(II)=15K
      IUP(II+1)=12K
      N=II+1
      CALL PACK (IUP,80,IOUT)
  110 CALL WRS (ICHN1,IOUT,N,IER)
      RETURN
      END
```

ERCP #28
FEBRUARY 1985

VIDTEX

PART A: PROGRAM INFORMATION AND INSTALLATION PROCEDURE

PROGRAM NAME: VIDTEX.SV

AAL ID:
REV NO.: 1.ØØ

PURPOSE:
This program will accept up to five AFOS products, split them up with separate headers for each section and reformat from up to an 8Ø character line to any line length less than 8Ø characters. It will also put in page separators for videotex format and insert document numbers and an ending code,if needed.

PROGRAM INFORMATION:

Development Programmer:
G. Rigdon
Location: WSFO Washington, DC
Phone: FTS 763-8Ø88
Language: DG FORTRAN IV/5.2Ø
Date: Ø1/14/85

Maintenance Programmer:
G. Rigdon
Location: WSFO Washington, DC
Phone: FTS 763-8Ø88
Type: Normal
Revision Date: NA

Run Time: Depends on length and number of products.
Disk Space: Program File - 57 RDOS Blocks
Data Files - Depends number of products used

PROGRAM REQUIREMENTS

Program Files:

Name	Comments
VIDTEX.SV	

Disk Files:

Name	Location	Action	Comments
VID.DT	Ø or ØF	Read	Contains input AFOS ID's and headings for sections of products when global

switch B is used.

AFOS Products:

ID	Action	Comments
cccnnnxxx	Read	Any products designated by local switch I or VID.DT
VIDEOTEX	Stored	Reformatted product (location can be changed by using local switch O)
VIDTEXMSG	Stored	Contains errors or possible errors detected during processing of products. (Produced only when global switch M) is used.)

LOAD LINE

RLDR VIDTEX PVREAD RDSWV NCURJT RDT WRTERR IASC ZDTG COMP RDWRT WRTS <TOP BG UTIL FORT>.LB

PROGRAM INSTALLATION

1. Put VIDTEX.SV on DPØ or on DPØF linked to DPØ.

2. Make sure VIDEOTEX and VIDTEXMSG are in the database (unless you want to use a different output product and /or will not use global /M). Set the alarm on VIDTEXMSG.

3. Prepare and store on the DPØ or on DPØF linked to DPØ a file named VID.DT. Another name can be used, but before it can be used by the program, it must be linked to VID.DT. See below for instructions and refer to Figure 1 in ERCP #28 for sample VID.DT file.

PREPARATION OF VID.DT
(Refer to Figure 1 during this explanation.)

The first line of the file contains the AFOS ID of the first input product to be used. Up to 5 products can be used as input. If you have 1 product use 1 line, 2 products use 2 lines, etc. Figure 1 has 3 products BOSOFFBOS, WBCOFFWBC, and WBCLFPWBC. The

next line of the file begins with a "/" slant. It has a series of numbers on it, each preceeded by a slant. These are codes for the program. The first 2 code numbers (/1/2) in Figure 1 are associated with the first AFOS ID in the first line of the file. Each code number corresponds to a section of BOSOFFBOS that is to be separated out. /2 is followed by a space. After the space, there is a group of 3 code numbers (/3/4/5) followed by a space. This group of code numbers is associated with the second AFOS ID in the second line of the file. Each number corresponds to a section of WBCOFFWBC that is to be separated out. After the space is 1 code number (/6). This code number is associated with the third AFOS ID in the third line of the file. Only one section is to be separated out of WBCLFPWBC.

The numbers must always be preceeded by a "/" slant and a space must be placed between each group of numbers to correspond with the AFOS ID's entered in the first 1 to 5 lines of the file. If you have 5 AFOS ID's entered, you must have 5 groups of numbers. The numbers should be consecutive and should not be repeated. Only one line of VID.DT can be used for this purpose, so the amount of code numbers that can be used is limited to the amount that can fit on that line.

The following lines in the file are lines of data which are to be used by the program either to compare a heading or write a line to the output file (VID.SC). The first two or three characters on a line represent the code number to be used (ex. /1). The data that goes with that code number begins in the eleventh space on the line.

The first line of the lines that have the same code number is used for comparision with a header in the AFOS product associated with that code number. This line must have at least the same number of characters on it as are needed to match the header. If the default value is used, the line must have 12 or more characters on it. If the last character to be matched is a space, you must have one extra character after the space. If a match is found, the program will write the remaining lines that are associated with that code number to the output file (VID.SC). If an asterisk "*" is in space 11, the program will write the mass media header date/time line from the AFOS product to the output file (VID.SC).

After the program finishes writing the headings from the "VID.DT" file, it goes back to the AFOS product and begins reformatting and writing lines of text starting with the first line that begins with a period after the header that it matched. It quits writing for each heading when it finds the cutoff codes

($$ or MM). See explanation of local switch E and global switch X.

The headings that are in the "VID.DT" file should not be longer than the line length that is wanted in the finished product. The program does not reformat these lines.

After the headings are written a blank line is also written.

The last line of the "VID.DT" file should have a code number that is not to be used (any number will do that is not used elsewhere).

ERCP #28
FEBRUARY 1985

VIDTEX

PART B: PROGRAM EXECUTION AND ERROR CONDITIONS

PROGRAM NAME: VIDTEX.SV

AAL ID:
REV NO.: 1.ØØ

PROGRAM EXECUTION:

The command line uses the following format:

RUN:VIDTEX/[global switches] [input data]/[local switches]

See below for definition of switches. You will probably want to set up a macro for each use of the program.

ERROR CONDITIONS

ADM MESSAGES	MEANING
JOB CCCNNNXXX ABORTED - ERROR CONDITION: PLS RE-STORE	VIDTEX can't read the input product. Edit and restore. Will appear only when global switch B is NOT used.

DASHER MESSAGES	MEANING
NONE	

VIDTEXMSG MESSAGES	MEANING
1. COULD NOT READ...PLEASE RE-STORE PRODUCT	VIDTEX can't read the input product. Edit and re-store.
2. COULD NOT MATCH HEADING ...CHECK FORMAT	VIDTEX could'nt find a heading in AFOS product that matched one in VID.DT file.
3. PERIOD (.) MISSING AFTER HEADING	No line that began with a . was found after matching heading was found.

4. PERIOD (.) POSSIBLY MISSING AFTER HEADING	A line beginning with a . was found but it was more than 7 lines after the heading. (The number of lines can be changed with local switch K)
5. PRODUCT TOO OLD	This means that a product was over 6 hours old, however it was still processed. (The time can be changed with local switch T)

GLOBAL SWITCHES FOR VIDTEX

B

This option uses the VID.DT file to input up to 5 AFOS products. It also allows these products to be separated into sections with their own headers. If this switch is not used, the program will reformat one product input with local switch I.

J

This option means that no page separators are to be used. The default page separator is \ (reverse slant). This can be changed by using local switch P.

M

This option is used with global switch B. This produces a list of errors or possible errors detected during processing. The output is stored in AFOS location VIDTEXMSG.

W

This option will produce a WOUSØØ header using the station ID from the SKEL file and the system time.

X

This option tells the program to ignore any cutoff codes. The default cutoff codes are $$ of MM. These defaults can be changed using local switch E.

LOCAL SWITCHES FOR VIDTEX

A

This switch is used to change the default addressee for the output AFOS location. Default addressee is the station ID from the SKEL file. Ex.: E/A or ØØØ/A

C

This switch is used to change the default number for the number of characters on a line (this includes a carriage return and line feed at the end of each line). Default is 32. Ex.: 5Ø/C or 42/C.

D

This switch is used to change the default priority of the output AFOS product. Default is 3. Ex.: 2/D or 4/D.

E

This switch is used to change the default cutoff codes. The cutoff codes stop the processing of the input data. Two characters must be entered, but they can be the same character. The default codes are $$ or MM at the end of a line. Ex.: GA/E (gives cutoff codes GG and AA) or KK/E (gives only one cutoff code of KK)

F

This switch is used to place a code at the end of the reformatted AFOS product. A computer that you might send this message to may need one. Up to 4 characters can be used. Ex.: |/F or ~|/F.

G

This switch is used with global switch B and the VID.DT file to change the default value of the number of characters used when comparing headings from the AFOS input location with those from the VID.DT file. The default value is 12. This should be an even number and the number of characters is limited to 16. Ex.: 1Ø/G or 14/G.

H

This switch is used to change the default value for a line length that is considered to be the end of a heading or the end of a paragraph. If the number of characters on a line is less than this value, no characters from the next line are added to the end of it. The default value is 5Ø. Ex.: 3Ø/H or 41/H.

I

This switch is used to tell the program what AFOS location to use as input. It can only be used when global switch B is NOT used. Ex.: WBCLFPWBC/I.

K

This switch is used to change the default setting for the number of lines used for the error message "PERIOD (.) POSSIBLY MISSING AFTER HEADING" that is put into the AFOS product VIDTEXMSG if global switch M is used. The default value is 7. Ex.: 5/K or 9/K.

L

This switch is used to change the default value of the number of lines per page. This is where a page separator is placed (if needed). The default is 16. Ex.: 14/L or 2Ø/L.

N

This switch is used to enter a document number or file name at the beginning of the AFOS output product. There is an 18 character limit. This should NOT be used with the global switch B. If global switch B is used, document numbers and filenames should be placed in the VID.DT file. Ex.: ~7Ø16/N or FILENAME/N.

O

This switch is used to change the default AFOS output location. The default is VIDEOTEX. Ex.: WBCWRKVID/O.

P

This switch is used to change the default character of the page separator. Up to 4 characters can be used. The default is \ (reverse slant). Ex.: |/P or ~\|/P.

S

In the VID.DT file, after a match of headers is found, several lines can be written from VID.DT to the output file. In the default case, the first 2 lines written are the document number and the page separator. The default value is 2 so that these lines are not counted as lines on a page. This switch is used to change that default setting, when a different number of lines are not to be counted as lines on a page. Ex.: 1/S or 3/S.

T

This switch is used to change the default value of the time that a product would be stored in the database to be considered old. This time is used only when the global switch M is used for

error messages. The amount of time is in minutes. The default value is 360 minutes or 6 hours. Ex.: 240/T or 500/T.

Eastern Region Computer Programs and Problems (Continued)

19 Verification of Asynchronous Transmissions. Lawrence Cedrone, March 1984. (PB84 189885)

20 AFOS Hurricane Plotter. Charles Little, May 1984. (PB84 199629)

21 WARN - A Warning Formatter. Gerald G. Rigdon, June 1984. (PB84 204551)

22 Plotting TDL Coastal Wind Forecasts, Paula Severe, June 1984 (Revised) (PB84-220789)

23 Severe Weather Statistics STADTS Decoder (SWX) and Plotter (SWY), Hugh M. Stone, June 1984. (PB84-213693)

24 WXR, Harold Opitz, August 1984. (PB84-23722)

25 FTASUM: Aviation Forecast Summaries, Matthew Peroutka, August 1984. (PB85-112977)

26 SAOSUM: A Short Summary of Observations. Matthew Peroutka, October 1984. (PB85-120384)

27 TRAJ - Single Station Trajectory Plot, Tom Niziol, December 1984. (PB85-135002)

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