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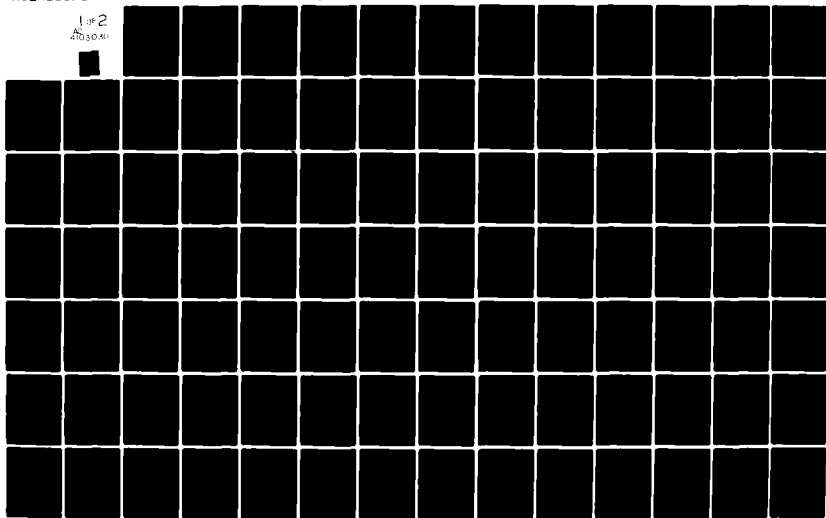
DAVID W TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CE--ETC F/G 9/2
COMPUTER CENTER CDC LIBRARIES/UTILITY (PROGRAMS).(U)

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Computer Center CDC Libraries/Utility (Programs)

CMLD-81-09

**DAVID W. TAYLOR NAVAL SHIP
RESEARCH AND DEVELOPMENT CENTER**

Bethesda, Maryland 20084

COMPUTER CENTER
CDC LIBRARIES/UTILITY
(PROGRAMS)

by

David V. Sommer

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Computation, Mathematics and Logistics Department
Departmental Report

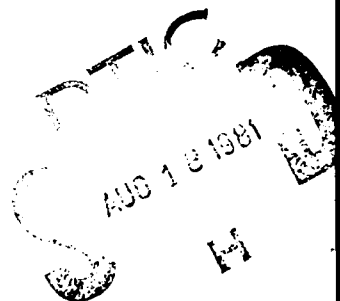
February 1981

CMLD-81-09

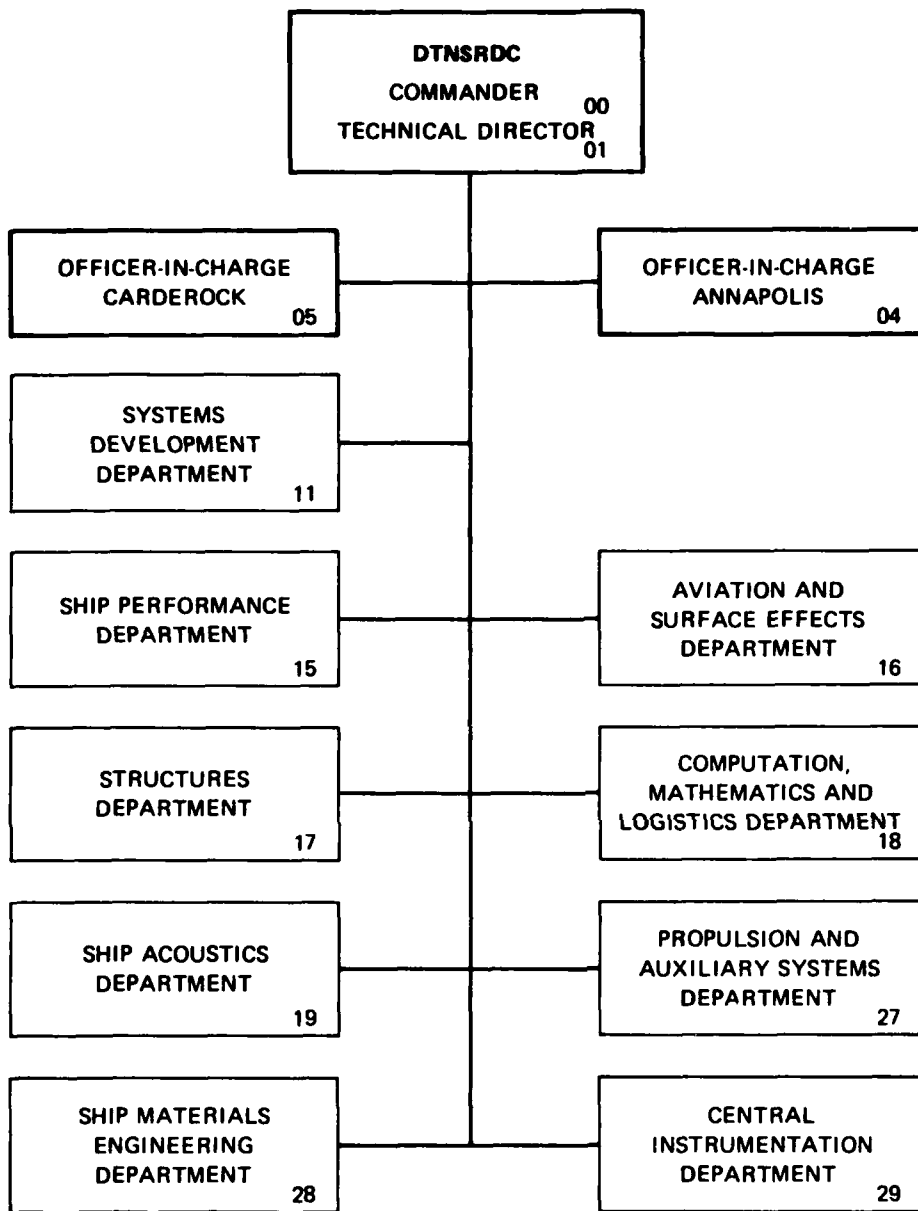
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Computer Center CDC Libraries/Utility (Programs), CLIB/U is a reference manual which describes the programs in library UTILITY on the CDC 6000/ Cyber 74 computers. These programs are utilities such as tape and disk dumps, listers, selective copies, document generators/printers, card reformatters, library maintenance. CLIB/U lists programs by functional category and alphabetically with a descriptive title. All machine-readable documents detailing the use of these programs are included.		

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*      COMPUTER CENTER
*      CDC LIBRARIES / UTILITY
*      (PROGRAMS)
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● 此項研究係由美國國家衛生研究院（NIH）資助，由美國國家癌症研究所（NCI）和美國國家心臟、中風及血液研究所（NHLBI）共同資助。

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* - A LISTING OF THE DOCUMENTS IS NOT INCLUDED IN THIS TABLE OF CONTENTS (SEE PAGE 1-7). AS NEW ROUTINES ARE DEVELOPED, THEY WILL BE INSERTED ALPHABETICALLY INTO THIS DOCUMENT AND MAY BE PRINTED ON THE COMPUTER.

***** INTRODUCTION *****

THE COMPUTER CENTER MAKES AVAILABLE ON THE CDC COMPUTERS, IN ADDITION TO THE NOS/BE OPERATING SYSTEM, A WIDE VARIETY OF BOTH SCIENTIFIC AND UTILITY PROGRAMS, SUBPROGRAMS AND CATALOGUED PROCEDURES. MOST OF THE ROUTINES ARE MAINTAINED IN LIBRARIES ON PERMANENT FILES AND MAY BE INVOKED BY THE APPROPRIATE (LOADER) CONTROL CARDS. A FEW PROGRAMS ARE AVAILABLE AS INDEPENDENT PERMANENT FILES.

THE CLIB-SERIES OF MANUALS CONSISTS OF THE FOLLOWING, WHICH DESCRIBE THE CONTENTS OF THE VARIOUS CDC 6000 LIBRARIES MAINTAINED BY THE COMPUTER CENTER:

CLIB	- COMPUTER CENTER CDC LIBRARIES	CMLD-81-06
CLIB/N	- COMPUTER CENTER CDC LIBRARIES/NSRDC (SUBPROGRAMS)	CMLD-81-07
CLIB/P	- COMPUTER CENTER CDC LIBRARIES/PROCFIL (PROCEDURES)	CMLD-81-08
CLIB/U	- COMPUTER CENTER CDC LIBRARIES/UTILITY (PROGRAMS)	CMLD-81-09
CLIB/M	- COMPUTER CENTER CDC LIBRARIES/MNSRDC (PROGRAMS)	

THIS MANUAL, CLIB/U, IS A REFERENCE MANUAL WHICH DESCRIBES MOST OF PROGRAMS IN LIBRARY 'UTILITY'.

*** HOW TO USE THIS MANUAL ***

THE PROGRAMS ARE CLASSIFIED IN ONE OR MORE FUNCTIONAL CATEGORIES (SEE PAGE 1-2 FOR A LIST OF CATEGORIES). THEY ARE LISTED, BEGINNING ON PAGE 1-5, UNDER THE VARIOUS CATEGORIES. THE INDIVIDUAL PROGRAMS ARE LISTED, WITH DESCRIPTIVE TITLE, BEGINNING ON PAGE 1-7. CHAPTER 2 CONTAINS ALL CURRENTLY AVAILABLE MACHINE-READABLE DOCUMENTS DESCRIBING THE USE OF PROGRAMS IN LIBRARY 'UTILITY'.

*** LIBRARY UTILITY ***

'UTILITY' IS A LIBRARY OF DTNSRDC WRITTEN AND/OR SUPPORTED UTILITIES AND INCLUDES TAPE AND DISK DUMPS, LISTERS, SELECTIVE COPIES, DOCUMENT GENERATORS/PRINTERS, CARD REFORMATTERS, AND LIBRARY MAINTENANCE ROUTINES.

*** EXECUTING A PROGRAM ***

PROGRAMS IN THIS LIBRARY ARE EXECUTED IN ONE OF THE FOLLOWING WAYS:

- A) ATTACH,UTILITY.
LIBRARY,UTILITY. OR LDSET,LIB=UTILITY.
<PROG>,<PARAMETERS>. WHERE <PROG> IS THE DESIRED
PROGRAM
- B) BEGIN,UTILITY,<PROG>,<PARAMETERS>.

*** FUNCTIONAL CATEGORIES ***

THE FOLLOWING FUNCTIONAL CATEGORIES ARE USED AT DTNSRDC. THOSE CATEGORIES PRECEDED BY AN ASTERISK (*) ARE LOCAL DTNSRDC CATEGORIES. THE OTHER ARE FROM THE VIM (CDC USERS GROUP) LIST.

- A0 ARITHMETIC ROUTINES
- A1 REAL NUMBERS
- A2 COMPLEX NUMBERS
- A3 DECIMAL
- A4 I/O ROUTINES

- B0 ELEMENTARY FUNCTIONS
- B1 TRIGONOMETRIC
- B2 HYPERBOLIC
- B3 EXPONENTIAL AND LOGARITHMIC
- B4 ROOTS AND POWERS

- C0 POLYNOMIALS AND SPECIAL FUNCTIONS
- C1 EVALUATION OF POLYNOMIALS
- C2 ROOTS OF POLYNOMIALS
- C3 EVALUATION OF SPECIAL FUNCTIONS (NON-STATISTICAL)
- C4 SIMULTANEOUS NON-LINEAR ALGEBRAIC EQUATIONS
- C5 SIMULTANEOUS TRANSCENDENTAL EQUATIONS
- * C6 ROOTS OF FUNCTIONS

- D0 OPERATIONS ON FUNCTIONS AND SOLUTIONS OF DIFFERENTIAL EQUATIONS
- D1 NUMERICAL INTEGRATION
- D2 NUMERICAL SOLUTIONS OF ORDINARY DIFFERENTIAL EQUATIONS
- D3 NUMERICAL SOLUTIONS OF PARTIAL DIFFERENTIAL EQUATIONS
- D4 NUMERICAL DIFFERENTIATION

- E0 INTERPOLATION AND APPROXIMATIONS
- E1 TABLE LOOK-UP AND INTERPOLATION
- E2 CURVE FITTING
- E3 SMOOTHING
- E4 MINIMIZING OR MAXIMIZING A FUNCTION

- F0 OPERATIONS ON MATRICES, VECTORS & SIMULTANEOUS LINEAR EQUATIONS
- F1 VECTOR AND MATRIX OPERATIONS
- F2 EIGENVALUES AND EIGENVECTORS
- F3 DETERMINANTS
- F4 SIMULTANEOUS LINEAR EQUATIONS

- G0 STATISTICAL ANALYSIS AND PROBABILITY
- G1 DATA REDUCTION (COMMON STATISTICAL PARAMETERS)
- G2 CORRELATION AND REGRESSION ANALYSIS
- G3 SEQUENTIAL ANALYSIS
- G4 ANALYSIS OF VARIANCE
- G5 TIME SERIES
- G6 SPECIAL FUNCTIONS (INCLUDES RANDOM NUMBERS AND PDF'S)
- * G7 MULTIVARIATE ANALYSIS AND SCALE STATISTICS
- * G8 NON-PARAMETRIC METHODS AND STATISTICAL TESTS
- * G9 STATISTICAL INFERENCE

H0 OPERATIONS RESEARCH TECHNIQUES, SIMULATION & MANAGEMENT SCIENCE
H1 LINEAR PROGRAMMING
H2 NON-LINEAR PROGRAMMING
H3 TRANSPORTATION AND NETWORK CODES
H4 SIMULATION MODELING
H5 SIMULATION MODELS
H6 CRITICAL PATH PROGRAMS
H8 AUXILIARY PROGRAMS
H9 COMBINED

I0 INPUT
I1 BINARY
I2 OCTAL
I3 DECIMAL
I4 BCD (HOLLERITH)
I9 COMPOSITE

J0 OUTPUT
J1 BINARY
J2 OCTAL
J3 DECIMAL
J4 BCD (HOLLERITH)
J5 PLOTTING
J7 ANALOG
J9 COMPOSITE

K0 INTERNAL INFORMATION TRANSFER
K1 EXTERNAL-TO-EXTERNAL
K2 INTERNAL-TO-INTERNAL (RELOCATION)
K3 DISK
K4 TAPE
K5 DIRECT DATA DEVICES

L0 EXECUTIVE ROUTINES
L1 ASSEMBLY
L2 COMPILING
L3 MONITORING
L4 PREPROCESSING
L5 DISASSEMBLY AND DERELATIVIZING
L6 RELATIVIZING
L7 COMPUTER LANGUAGE TRANSLATORS

M0 DATA HANDLING
M1 SORTING
M2 CONVERSION AND/OR SCALING
M3 MERGING
M4 CHARACTER MANIPULATION
M5 SEARCHING, SEEKING, LOCATING
M6 REPORT GENERATORS
M9 COMPOSITE

N0 DEBUGGING
N1 TRACING AND TRAPPING
N2 DUMPING
N3 MEMORY VERIFICATION AND SEARCHING
N4 BREAKPOINT PRINTING

00 SIMULATION OF COMPUTERS AND DATA PROCESSORS (INTERPRETERS)
01 OFF-LINE EQUIPMENT (LISTERS, REPRODUCERS, ETC.)
03 COMPUTERS
04 PSEUDO-COMPUTERS
05 SOFTWARE SIMULATION OF PERIPHERALS
09 COMPOSITE

P0 DIAGNOSTICS (HARDWARE MALFUNCTION)

Q0 SERVICE OR HOUSEKEEPING, PROGRAMMING AIDS
Q1 CLEAR/RESET
Q2 CHECKSUM ACCUMULATION AND CORRECTION
Q3 REWIND, TAPE MARK, LOAD CARDS, LOAD TAPE PROGRAMS, ETC.
Q4 INTERNAL HOUSEKEEPING, SAVE, RESTORE, ETC.
Q5 REPORT GENERATOR SUBROUTINES
Q6 PROGRAM DOCUMENTATION: FLOW CHARTS, DOCUMENT, STANDARDIZATION
Q7 PROGRAM LIBRARY UTILITIES

R0 LOGIC AND SYMBOLIC
R1 FORMAL LOGIC
R2 SYMBOL MANIPULATION
R3 LIST AND STRING PROCESSING
R4 TEXT EDITING

S0 INFORMATION RETRIEVAL

T0 APPLICATIONS AND APPLICATION-ORIENTED PROGRAMS
T1 PHYSICS (INCLUDING NUCLEAR)
T2 CHEMISTRY
T3 OTHER PHYSICAL SCIENCES (GEOLOGY, ASTRONOMY, ETC.)
T4 ENGINEERING
T5 BUSINESS DATA PROCESSING
T6 MANUFACTURING (NON-DATA) PROCESSING AND PROCESS CONTROL
T7 MATHEMATICS AND APPLIED MATHEMATICS
T8 SOCIAL AND BEHAVIORAL SCIENCES AND PSYCHOLOGY
T9 BIOLOGICAL SCIENCES
T10 REGIONAL SCIENCES (GEOGRAPHY, URBAN PLANNING)
T11 COMPUTER ASSISTED INSTRUCTION

U0 LINGUISTICS AND LANGUAGES

V0 GENERAL PURPOSE UTILITY SUBROUTINES
V1 RANDOM NUMBER GENERATORS
V2 COMBINATORIAL GENERATORS: PERMUTATIONS, COMBINATIONS & SUBSETS
* V3 STANDARD AND SPECIAL PROBLEMS

X0 DATA REDUCTION
X1 RE-FORMATTING, DECOMMUTATION, ERROR DIAGNOSIS
X2 EDITING
X3 CALIBRATION
X4 EVALUATION
X5 ANALYSIS (TIME-SERIES ANALYSIS)
X6 SIMULATION (GENERATE TEST DATA FOR DATA REDUCTION SYSTEM)

Y0 INSTALLATION MODIFICATION
Y1 INSTALLATION MODIFICATION LIBRARY
Y2 NEWPL TAPE OF INSTALLATION MODIFICATIONS

Z0 ALL OTHERS

*** LIST OF PROGRAMS BY CATEGORY ***

THE PROGRAMS IN LIBRARY 'UTILITY' ARE LISTED BELOW UNDER THEIR FUNCTIONAL CATEGORIES. AN ALPHABETICAL LIST, WITH A BRIEF DESCRIPTION OF EACH PROGRAM BEGINS ON PAGE 1-7.

J1	BINARY CV029		
J4	BCD (HOLLERITH) BANNER BANNERS	BANNER3 BANNER6	
J9	COMPOSITE HEXDMP	PRUDMP	TAPDMP
K1	EXTERNAL-TO-EXTERNAL COPYRE COPYSEL	DOCUMNT PROMNT	
K3	DISK COPYLIB GETOBJ	NEWNAME PRUDMP	
K4	TAPE AUDPFT	HEXDMP	TAPDMP
M0	DATA HANDLING COMPAR		
M1	SORTING AUDSORT	DEKSORT	
M2	CONVERSION AND/OR SCALING CV029		
M4	CHARACTER MANIPULATION ASCDC	COPYEXT	
M6	REPORT GENERATORS PR2UP		
N2	DUMPING DMPFIL HEXDMP	PRUDMP TAPDMP	
O1	OFF-LINE EQUIPMENT (LISTERS, REPRODUCERS, ETC.) CARDS CARDS2 COPYEXT COPYRE COPYSEL CV029 FRAME	GETREV LINERL LISTCMP LISTEO1 LISTN LISTZ LIST1	LIST2 LIST3 LIST4 MANUAL PAGEPRT PR2UP

Q0	SERVICE OR HOUSEKEEPING, PROGRAMMING AIDS		
	AUDPFT	CBLFMT	LINERL
	BANNER	DFDATIM	PTIM
	BANNERS	EOFAD	S2KRNM
	BANNER3	FRAME	WHATLIB
	BANNER6	JOBTIME	WHICHMF
	CALCIBL	LINER	WHICHOS
Q3	FILE MANIPULATION		
	EOI		
Q6	PROGRAM DOCUMENTATION: FLOW CHARTS, DOCUMENT	STANDARDIZATION	
	DOC	EXECARD	PROGDOC
	DOCDAT	MANYDOC	PURPOSE
	DOCIT	MTDOC	TAPLIST
	DOCUMNT	PFDOD	UNDOCIT
Q7	PROGRAM LIBRARY UTILITIES		
	BINDEX	DEKSORT	PROMNT
	DECK	LISTBIN	REDECK
	DECKLST	LISTCMP	SORTUP
S0	INFORMATION RETRIEVAL		
	AUDPFT	GETREV	PROMNT
	AUDSORT	MANUAL	PURPOSE
	DOCDAT	MANYDOC	TAPLIST
	DOCUMNT	PAGEPRT	
	EXECARD	PROGDOC	

*** DESCRIPTIVE TITLES ***

PROGRAMS IN LIBRARY 'UTILITY' ARE LISTED ALPHABETICALLY BELOW.

ASDC	CONVERT 7-BIT ASCII FILE TO 6-BIT CDC AND VICE VERSA
AUDPFT	PRODUCE MINI-AUDIT OF USER PFDUMP TAPES CREATED BY SELDUMP OR PRIVATE PACK PFDUMP
AUDSORT	SORT OUTPUT FROM USER AUDIT
BANNER	PRINT A BANNER (PAGE)
BANNERS	PRINT 1 TO 8 BANNERS ON ONE PAGE
BANNER3	PRINT 3 BANNERS ON ONE PAGE (LETTERS ARE 10 LINES HIGH)
BANNER6	PRINT 1-6 BANNERS ON ONE PAGE (LETTERS ARE 6 LINES HIGH)
BINDEX	GIVE LIST AND SORTED LIST OF OUTPUT OF EDITLIB 'LISTLIB' AND 'CONTENT' DIRECTIVES
CALCIBL	CALCULATE BEST BLOCK LENGTHS (I.E., MINIMUM TIME REQUIRED FOR RANDOM ACCESS AND MINIMUM BUFFER SIZE) FOR INDEX SEQUENTIAL FILE
CARDS	REPRODUCE A BCD DECK WITH MODIFICATIONS. (FIELDS MAY BE MOVED, DELETED, INTERCHANGED, GANG PUNCHED AND/OR SEQUENCED)
CARDS2	REPRODUCE A BCD DECK WITH MODIFICATIONS. (FIELDS MAY BE COPIED, MOVED, DELETED, INTERCHANGED, GANG PUNCHED AND/OR SEQUENCED.)
CBLFMT	REFORMAT A COBOL SOURCE PROGRAM TO ENHANCE ITS READABILITY, THEREBY MAKING IT EASIER TO UNDERSTAND AND MODIFY
COMPAR	COMPARE TWO TEXT FILES AND REPORT ANY DIFFERENCES
COPYEXT	COPY UNIT RECORDS (ZERO BYTE TERMINATED) EXTRACTING SPECIFIED COLUMNS AND OPTIONALLY MOVING THEM AND OPTIONALLY ADD EDITOR SEQUENCING
COPYLIB	FROM AN EDITLIB LISTLIB LISTING, CREATE SORTED (OR UNSORTED) DIRECTIVES TO COPY AN EDITLIB USER LIBRARY
COPYRE	COPY AND REARRANGE FILE OF ZERO BYTE TERMINATED RECORDS (150 CHARACTERS MAXIMUM PER RECORD; FILE PROCESSED IN CORE)
COPYSEL	COPY AND REARRANGE FILE OF ZERO BYTE TERMINATED RECORDS (150 CHARACTERS MAXIMUM PER RECORD; FILE PROCESSED DIRECTLY)
CV029	CONVERT TO 029 PUNCH CODE
DECK	LIST UPDATE 'SOURCE' FILE DECK/COMDECK NAMES, SEQUENCE NUMBER AND NUMBER OF CARDS

DECKLST LIST UPDATE 'SOURCE' FILE DECK/COMDECK NAMES, SEQUENCE
NUMBER, NUMBER OF CARDS, NUMBER OF LINES AND PAGES (IF COLUMN
1 CARRIAGE CONTROL IS USED). (LIST CONTENTS OF A
DOCUMENTATION FILE)

DEKSORT SORT IDENT AND DECK LISTINGS FROM UPDATE OUTPUT FILE

DFDATIM PUT DATE/TIME INTO DAYFILE

DMPFIL DUMP FIRST N WORDS OF EACH LOGICAL RECORD IN M FILES

DOC PREPARE (SUB)PROGRAM AND CATALOGUED PROCEDURE DOCUMENTATION

DOCDAT LIST DOCUMENT NAMES, DATES AND PAGE NUMBERS

DOCIT ADD PAGING TO ONE OR MORE DOCUMENTS

DOCUMNT MAINTAIN A FILE OF DOCUMENTS

EOFAD ADD OR DELETE EOF'S TO/FROM A FILE (THRU EOI)

EOI POSITION A FILE AT END-OF-INFORMATION (EOI)

EXECARD EXTRACT EXECUTE CARD PARAMETER/SUBPROGRAM USAGE/PROCEDURE
USAGE INFORMATION FROM DOCUMENTATION FILES (WHICH WERE
PREPARED IN THE FORMAT GENERATED BY PROGRAM 'DOC')

FRAME PRINT A FRAME FOR LINING UP PRINTOUTS

GETOBJ EXTRACT ONE OBJECT MODULE FROM A SEQUENTIAL OBJECT FILE OR AN
EDITLIB USER LIBRARY

GETREV EXTRACT ALL PAGES FROM A MANUAL WHICH WERE MODIFIED AFTER
USER-SPECIFIED DATE

HEXDMP DUMP 9-TRACK TAPE IN HEXADECIMAL FORMAT

JOBTIME PUT JOB CP EXECUTION TIME TO THIS POINT INTO DAYFILE

LINER COUNT LINES AND PAGES OF A FILE HAVING FIRST CHARACTER
CARRIAGE CONTROL

LINERL LIST A DOCUMENT (CARRIAGE CONTROL IN COLUMN 1, ZERO BYTE
TERMINATED RECORDS) WITH RECORD COUNT AND COUNT OF LINES ON
EACH PAGE. LIST THRU END-OF-INFORMATION.

LISTBIN LIST BINARY MODULES AND PROCEDURES IN ONE OR MORE FILES

LISTCMP LIST AN UPDATE COMPILE FILE, EACH DECK BEGINNING ON A NEW
PAGE WITH A BANNER PAGE PRECEDING IT

LISTEOI LIST A FILE INSERTING *EOR, *EOF, *EOI WHERE APPROPRIATE

LISTN NUMBERED LIST OF ONE FILE OF ZERO-BYTE TERMINATED RECORDS

LISTZ LIST ZERO-BYTE TERMINATED RECORDS WITH RECORD NUMBER AND LENGTHS (USER MAY SPECIFY MAXIMUM NUMBER OF CHARACTERS TO READ (DEFAULT: 140) AND PRINT (DEFAULT: 110))

LIST1 LIST (CENTERED) ONE COPY OF CARDS (UP TO 90 CHARACTERS) HAVING CARRIAGE CONTROL IN COLUMN 1. OPTIONALLY PRINT CARD, PAGE AND LINE COUNTS AND LINE LENGTHS.

LIST2 SINGLE/DOUBLE SPACE LISTING, 6 OR 8 LINES PER INCH, WITH OPTIONAL SKIP OVER PERFORATION AT BOTTOM OF PAGE (FIRST 120 CHARACTERS)

LIST3 LIST FIRST (UP TO 90-CHARACTER, ZERO BYTE TERMINATED) RECORD IN EACH LOGICAL RECORD THROUGH EOI

LIST4 LIST UNIT RECORDS, THRU EOI, WHICH HAVE '1' IN COLUMN 1

MANUAL EXTRACT (PRINT) REVISION PAGES FROM A MANUAL

MANYDOC EXTRACT (PRINT) TWO OR MORE DOCUMENTS FROM A DOCUMENT FILE

MTDOC CREATE DOCUMENTATION TO DESCRIBE THE CONTENTS OF A MAGNETIC TAPE

NEWNAME RENAME A SIMPLE ABSOLUTE MODULE

PAGEPRT PRINT SELECTED PAGE(S) FROM A DOCUMENT

PFDOC CREATE PERMANENT FILE DOCUMENTATION

PROGDOC EXTRACT (PRINT) ONE OR ALL DOCUMENT(S) FROM A DOCUMENT FILE

PROMNT MAINTAIN AN ALPHABETICAL, SEQUENTIAL PROCEDURE FILE

PRUDMP OCTAL AND CHARACTER DUMP OF DISK FILE BY RELATIVE PRU NUMBER

PR2UP REFORMAT A SINGLE-COLUMN REPORT FILE COMPOSED OF 60-CHARACTER LINES INTO A DOUBLE-COLUMN FORMAT HAVING A MAXIMUM TOTAL LINE LENGTH OF 132 PRINTABLE CHARACTERS (PLUS 1 POSITION FOR CARRIAGE CONTROL). THE OUTPUT WILL BE SUITABLE FOR PRINTING EITHER ON A LINE PRINTER OR ON XEROX 8-1/2 X 11 PAPER.

PTIM PRINT CPA, CPB, CPA+CPB, IO AND PP TIMES SINCE START OF JOB OR INTERCOM SESSION

PURPOSE EXTRACT PURPOSE INFORMATION FROM DOCUMENTATION FILES (WHICH WERE PREPARED IN THE FORMAT GENERATED BY PROGRAM 'DOC')

REDECK CHANGE AN UPDATE COMPILE FILE BACK INTO A SOURCE FILE

SORTUP GENERATE UPDATE DIRECTIVES TO SORT OLDPL

S2KRNM RENAME ACCOUNT NUMBER ON CATALOGED S2000 DATA BASE FILES

TAPDMP DUMP SELECTED PORTIONS OF A 7-TRACK MAGNETIC TAPE WRITTEN IN AN UNKNOWN DENSITY AND/OR MODE. IT IS CONTROLLED BY A SERIES OF FREE-FIELD CONTROL CARDS CONTAINING ORDERS FOR THE DUMPING, SKIPPING OR BACKSPACING OF RECORDS OR FILES.

TAPLIST PREPARE TWO LISTS FROM MAGTAPEDOCUMENTATION FILE: 1) LIST OF TAPE NUMBER, LABEL, DENSITY, REMARKS AND DESCRIPTION FOR EACH TAPE DOCUMENTED IN FILE 2) LIST OF TAPE NUMBERS AND LABELS

UNDOCIT REMOVE THE PAGING WHICH WAS ADDED TO DOCUMENT(S) BY PROGRAM 'DOCIT'

WHATLIB LIST LIBRARIES SPECIFIED ON LAST LIBRARY CARD

WHICHMF TELL TELETYPE USER WHICH MAINFRAME HE IS USING

WHICHOS TELL TELETYPE USER WHICH OPERATING SYSTEM HE IS USING

***** PROGRAM DOCUMENTATION *****

THIS CHAPTER CONTAINS THE DOCUMENTATION FOR ALL PROGRAMS IN
LIBRARY 'UTILITY' AS OF THE PUBLICATION DATE.

*** HOW TO PRINT A DOCUMENT ***

INDIVIDUAL DOCUMENTS MAY BE PRINTED USING:

BEGIN,DOCGET,,UTILITY,,<PROG>,OUTPUT.

WHERE <PROG> IS THE DESIRED DOCUMENT.

SEVERAL DOCUMENTS MAY BE PRINTED AT ONE TIME USING:

JOBNAME.
CHARGE.....
BEGIN,UTILITY,,MANYDOC,UTILITY.
' 7/8/9 EOR
<PROG1>
<PROG2>

<PROGN>
" 6/7/8/9 EOI

PROGRAM 'ASCDC'

PURPOSE

CONVERT 7-BIT ASCII FILE TO 6-BIT CDC AND VICE VERSA

FUNCTIONAL CATEGORIES: M4

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

CDC 63-CHARACTER SET USED.

5 7-BIT ASCII CHARACTERS PER CDC WORD; EACH 7-BIT CHARACTER
OCCUPIES THE RIGHT-MOST 7 BITS OF EACH 12-BIT BYTE.

EXECUTION

FROM BATCH

ATTACH,TAPE1,.... (FILE TO BE CONVERTED)

ATTACH,UTILITY.

LIBRARY,UTILITY.

ASCDC,.....

(DO SOMETHING WITH TAPE2)

FROM TTY

ATTACH,TAPE1,.... (FILE TO BE CONVERTED)

BEGIN,UTILITY,,ASCDC.

(DO SOMETHING WITH TAPE2)

EXECUTE CARD PARAMETERS

ASCDC,INFILE,OUTFILE,TYPE,OUTPUT.

INFILE - INPUT FILE TO BE CONVERTED

(REWOUND BEFORE AND AFTER USE)

OUTFILE - OUTPUT CONVERTED FILE

(PUT ON PF SPACE)

(REWOUND BEFORE AND AFTER CREATION)

TYPE - TYPE CONVERSION

OMITTED OR A2C - ASCII-TO-CDC

ANYTHING ELSE - CDC-TO-ASCII

OUTPUT - LISTABLE OUTPUT (FTN ERROR MESSAGES)

DEFAULT EXECUTE CARD

ASCDC,TAPE1,TAPE2,A2C,OUTPUT.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 26000B

FL NEEDED TO RUN : 16000B

ERROR MESSAGES

INPUT FILE EMPTY

NO INFORMATION IN INPUT FILE

INPUT/OUTPUT UNITS

UNIT # LFN

USE

UNIT #	LFN	USE
OUTPUT		LISTABLE OUTPUT (FTN ERROR MESSAGES)
TAPE1		INPUT FILE TO BE CONVERTED
TAPE2		OUTPUT CONVERTED FILE
DAYFILE		PROGRAM ERROR MESSAGES

METHOD

FOR ASCII-TO-CDC

EACH 12 BITS (CONTAINING THE ASCII CHARACTER IN THE RIGHT-MOST 7 BITS) IS CONVERTED TO THE 6-BIT CDC EQUIVALENT. THE RESULTING LINES WILL BE HALF THE LENGTH OF THE ASCII LINES.

FOR CDC-TO-ASCII

EACH 6-BIT CDC CHARACTER IS CONVERTED TO ITS 7-BIT ASCII REPRESENTATION AND IS STORED IN THE RIGHT-MOST 7 BITS OF EACH 12-BIT BYTE. THE RESULTING LINES ARE TWICE THE LENGTH OF THE CDC LINES.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	ENDFILE	FILESQ	GET	IFETCH
OPENM	PUT	STOREF	WEOR	

PART OF PROGRAM

TRANAC - TRANSLATE FROM ASCII TO CDC
TRANCA - TRANSLATE FROM CDC TO ASCII

OTHERS

GETCHA - EXTRACT CHARACTER FROM ARRAY
GETLFNS - GET ACTUAL LOCAL FILE NAMES
MOVSTR - MOVE CHARACTER STRING
PUTCHA - INSERT CHARACTER INTO ARRAY
REQUEST - REQUEST, TAPE2, *PF.
TRAILBZ - CHANGE TRAILING BLANKS TO 00B

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 03/04/77

DATE(S) REVISED

04/18/79 - CHANGE NAME FROM ASCDC7 TO ASCDC
- MOVE PROGRAM TO LIBRARY 'UTILITY'

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'AUDPFT'

PURPOSE

PRODUCE MINI-AUDIT OF USER PFDUMP TAPES CREATED BY SELDUMP
OR PRIVATE PACK PFDUMP

FUNCTIONAL CATEGORIES: Q0 S0 K4

LANGUAGE: FORTRAN IV EXTENDED

COMPUTER

CDC 6000

REMARKS

REQUIRES FULL OUTPUT LINE, LISTS CYCLE, ID, PFNAME, AC,
EST, SD, CREATION DATE, RP, LAST ACCESS, LAST MOD, #
ATTACHES, #EXTENDS, #MODIFIES, REEL NUMBER.
(THE THREE DATES ARE JULIAN DAY, YEAR.)

THE LAST FILE LISTED FOR A REEL PROBABLY SPANS ONTO THE NEXT
REEL ALSO.

THE LABEL CARD MAY REQUIRE 'V' OR 'E' PARAMETERS IF NOT THE
FIRST REEL OR IF CREATED BEFORE LEVEL 508 OF NOS/BE.

EXECUTION

FROM BATCH

PAUSE CARD TO INDICATE REELS, IF MULTI-REEL
VSN,TAPE24=....
LABEL,TAPE24,L=\$DUMPF TAPE- NEWS,F=S,D=HY,NORING,R.
BEGIN,UTILITY,,AUDPFT.

FROM TTY

NOT EXECUTABLE INTERACTIVELY, REQUIRES TAPE.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 33000B

FL NEEDED TO RUN : 17600B

OUTPUT DESCRIPTION

OUTPUT CONTAINS MOST AUDIT FIELDS EXCEPT SIZE OF FILE.

INPUT/OUTPUT UNITS

UNIT	#	LFN	USE
24		TAPE24	INPUT PFDUMP SET
6		OUTPUT	MINI-AUDIT OUTPUT LISTING

METHOD

READS PERMANENT FILE HEADERS FROM THE PFDUMP TAPES.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED
PART OF LANGUAGE
BUFFERIN SHIFT
PART OF PROGRAM
JOBNO

AUTHOR
SHARON E. GOOD - DTNSRDC CODE 1892.1

DATE WRITTEN: 06/09/80

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

CARD DECK CODE 1892.1 (S GOOD)

OBJECT

ED11LIB USER LIBRARY: UTILITY

PROGRAM 'AUDSORT'

PURPOSE

SORT OUTPUT FROM USER AUDIT

FUNCTIONAL CATEGORIES: M1 SO

LANGUAGE: FORTRAN IV EXTENDED

COMPUTERS

CDC 6000

REMARKS

THIS PROGRAM IS NORMALLY EXECUTED USING PROCEDURE 'AUDIT'.

THIS PROGRAM PROCESSES ALL AUDIT FORMATS, WHICH MAY BE MIXED IN ANY ORDER.

THIS PROGRAM WILL SORT UP TO 8 FIELDS, DEPENDING UPON THE AUDIT FORMAT. THE FIELDS ARE DESCRIBED IN THE EXECUTE CARD PARAMETERS BELOW. FOR AN AC AUDIT, THE DEFAULT SORT FIELDS ARE 4A, 3A, 1A, 2D. FOR ALL OTHER AUDITS, THEY ARE 1A, 2D.

EXECUTION

FROM BATCH AND TTY

BEGIN,AUDIT,,<KEYWORD-PARAMETERS>.

--OR--

AUDIT,LF=TEMP,<KEYWORD-PARAMETERS>.

ATTACH,UTILITY.

LDSET,LIB=UTILITY. OR LIBRARY,UTILITY.

AUDSORT,TEMP,OUTPUT,<SORT-OPTIONS>.

EXECUTE CARD PARAMETERS

AUDSORT,INFILE,OUTPUT,S1,S2,S3,S4,S5,S6,S7,S8,PL=.

INFILE - INPUT FILE (OUTPUT OF AUDIT)

OUTPUT - LISTABLE OUTPUT

S1-S8 - SORT OPTIONS

(A=ASCENDING, D=DESCENDING)

1A/1D - PF NAME - ALL SORTS

2A/2D - CYCLE - ALL SORTS

3A/3D - ID - AC SORT ONLY

4A/4D - ACCOUNT - ID (AI=1) OR

SEG - AC=JJJJJJJJ00

5A/5D - CREATED - AC OR ID (AI=1)

6A/6D - USED-ON - AC OR ID (AI=1)

7A/7D - # USES - AC OR ID (AI=1)

8A/8D - # PRUS - AC OR ID (AI=1)

PL= - PRINT LINE LIMIT

DEFAULT EXECUTE CARD

AUDSORT,TAPE1,OUTPUT,4A,3A,1A,2D,PL=5000. - AC AUDIT

AUDSORT,TAPE1,OUTPUT,1A,2D,PL=5000. - ALL OTHERS

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 27000B

FL NEEDED TO RUN : 52000B

(PROGRAM ADJUSTS CORE AS REQUIRED)

ERROR MESSAGES

ABEND

PROGRAM TERMINATED ABNORMALLY (PROBABLY CAUSED BY THE USER)

INPUT FILE EMPTY

INPUT FILE HAS NO INFORMATION IN IT

F UNDEFINED KEY(S)

SORT/MERGE MESSAGE. NO SORT KEYS WERE DEFINED. ALL USER-SPECIFIED SORTS WERE INVALID. RE-EXECUTE WITH VALID SORT OPTIONS OR DEFAULTS.

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
	OUTPUT	LISTABLE OUTPUT
	TAPE1	INPUT FILE (AUDIT OUTPUT FILE)
		REWOUND BEFORE AND AFTER USE
	ZZZWORK	WORK FILE FOR SORT/MERGE
		(RETURNED AT END-OF-PROGRAM)

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	FILESQ	GET	IFETCH
OPENM	OR	PUT	RECOVC	REMARK
REWND	SHIFT	SKIP	SMEND	SMFILE
SMKEY	SMOPT	SMOWN	SMRTN	SMSORT

PART OF PROGRAM

ABORT	- NON-EXISTENT ROUTINE TO FORCE ABORT
EOJ	- ABNORMAL TERMINATION ROUTINE
FAUDVAL	- VALIDATE AUDIT HEADER LINE
HEADER	- PROCESS HEADER RECORDS
ISHDR	- IS IT FIRST LINE OF AUDIT OUTPUT?
OUT3	- OUTPUT ROUTINE FOR SORT/MERGE
PRINT1	- PRINT SINGLE AUDIT ENTRY
SORT1	- SORT-KEYS FOR AUDIT AI=S FORMAT
SORT2	- SORT-KEYS FOR AUDIT AI=I ID FORMAT
SORT3	- SORT-KEYS FOR AUDIT AI=I AC FORMAT
SORT4	- SORT-KEYS FOR AUDIT AI=P AND AI=F FORMATS

OTHERS

GETLFNS	- GET ACTUAL LOCAL FILE NAMES
MOVEIT	- MOVE AN ARRAY
MOVSTR	- MOVE CHARACTER STRING
REPLAC	- CHARACTER REPLACEMENT

ARITHMETIC STATEMENT FUNCTIONS

AORD	- TEST FOR 'A' OR 'D'
A12FMT	- FAST A-FORMAT DECODE (LEFT-ADJ, BLANK-FILLED)
I74FMT	- FAST I-FORMAT DECODE
L11FMT	- FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
R29FMT	- FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)
R92FMT	- FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 03/22/78 (PROGRAM 'SRTFAUD')

DATE(S) REVISED

- 10/01/78 - EXPAND TO HANDLE ALL AUDIT FORMATS
 - NAME CHANGED TO 'AUDSORT' (OLD PROGRAM 'AUDSORT' DROPPED)
- 12/08/78 - CORRECT PROBLEM WITH MULTIPLE ID'S, ONE OF WHICH HAS 0 PRUS
- 08/18/80 - UPGRADE FOR CYBER 74
- 10/21/80 - ADD EST DAILY CHARGE TO AI=I/P/F AUDITS
- 10/28/80 - ADD EST MONTHLY CHARGE TO AI=I/P/F AUDITS
 - ADD # RBS AND UNUSED PRUS TO AI=I/P/F AUDITS
- 01/02/81 - EXPAND TO HANDLE USER DEVICE SET AUDITS

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'BANNER'

PURPOSE

PRINT A BANNER (PAGE)

FUNCTIONAL CATEGORIES: J4

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

THE BANNER PRINTED IS 10 LINES HIGH. IT MAY BE PRINTED ON A NEW PAGE OR THE CURRENT PAGE, DEPENDING ON THE ABSENCE OR PRESENCE OF A THIRD PARAMETER IN THE EXECUTE CARD. ONLY 2 BANNERS WILL FIT ON A PAGE.

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LIBRARY,UTILITY.

BANNER,ANY.

PRINT BANNER PAGE WITH WORD 'ANY

FROM TTY

BEGIN,UTILITY,,BANNER,ANY,OUT.

...

NORMALLY, MORE PROGRAMS WILL WRITE ON 'OUT'

ROUTE,OUT,DC=PR,TID=<TID>.

EXECUTE CARD PARAMETERS

BANNER,NAME,OUTPUT,WHERE.

NAME - WORD TO BE PRINTED (1-7 CHARACTERS - LETTERS AND NUMBERS ONLY)

THE FOLLOWING VALUES OF NAME HAVE SPECIAL MEANING:

CPU - THE CPU (6400/6600/6700/CY74)

DATE - TODAY'S DATE (MMDDYY)

MF - THE MAINFRAME (MFA/MFB/MFC/MFD)

TIME - THE CURRENT TIME (HHMMSS)

OUTPUT - LISTABLE OUTPUT

WHERE - OMITTED - PRINT BANNER ON A NEW PAGE

NON-BLANK - PRINT BANNER ON SAME PAGE

DEFAULT EXECUTE CARD

BANNER,DUMMY,OUTPUT,NEWPAGE.

FL NEEDED TO LOAD: 24000B

FL NEEDED TO RUN : 14000B

OUTPUT UNIT

UNIT #

LFN

USE

OUTPUT

LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND DATE SHIFT TIME

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES

LEFTADJ - SQUEEZE LEFT AND REMOVE BLANKS AND OOB

MFRAME - GET MACHINE AND MAINFRAME

AUTHOR

DAVID V SOMMER - NSRDC CODE 1892.2

DATE WRITTEN: 06/20/74

DATE(S) REVISED

06/19/75

11/02/76 - ADD BANNER,CPU.....

01/15/81 - RECOGNIZE 'MF' AS THE RUNNING MAINFRAME

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'BANNERS'

PURPOSE

PRINT 1 TO 8 BANNERS ON ONE PAGE

LANGUAGE: FORTRAN IV EXTENDED

FUNCTIONAL CATEGORIES: J4

REMARKS

PROGRAM 'BANNERS' SHOULD BE EXECUTED BY USING PUBLIC-ACCESS
PROCEDURE 'BANNERS'. THIS DOCUMENT DESCRIBES ONLY THE
PROGRAM 'BANNERS'.

1, 2, 3, 5, AND 6 BANNERS PER PAGE ARE PRINTED AT 6 LPI.

4, 7 AND 8 BANNERS PER PAGE ARE PRINTED AT 8 LINES/INCH WITH
THE PRINTER RESTORED TO 6 LINES/INCH AT END-OF-JOB.

EXECUTION

FROM BATCH

ATTACH,UTILITY.
LIBRARY,UTILITY.
BANNERS,INPUT,OUTPUT.

' 7/8/9 EOR
<NBANR>,'B1',"B2","B3","B4","B5","B6","B7","B8"
' 7/8/9 EOR

-OR-

BEGIN,BANNERS,.....

FROM INTERCOM

BEGIN,UTILITY,,BANNERS.<BANNER-INPUT-FILE>,OUTPUT.

...

-OR-

BEGIN,BANNERS,.....

...

ROUTE,OUTPUT,DC=PR,....

EXECUTE CARD PARAMETERS

BANNERS, INPUT, OUTPUT, NBANR, B1, B2, B3, B4, B5, B6, B7, B8,
 CONSOL. (MUST FIT ON ONE CARD)

INPUT - OPTIONAL INPUT FILE WITH BANNERS
 (USE 0 TO INDICATE BANNERS ARE IN THE
 EXECUTE STATEMENT)

OUTPUT - LISTABLE OUTPUT

NBANR - NUMBER OF BANNERS TO PRINT (0-8)
 (0 - PROGRAM WILL DETERMINE # OF BANNERS AND
 WILL ADD DATE AND TIME BANNERS. IF
 THERE IS ROOM)

B1-B8 - UP TO 8 BANNERS (1-7 CHARACTERS EACH)
 (WHEN THE PROCEDURE 'BANNERS' IS USED,
 BANNERS ARE 1-10 CHARACTERS EACH.)
 (WHEN DATA CARD(S) USED, BANNERS ARE 1-10
 CHARACTERS EACH AND EIGHT (8) MUST BE
 SUPPLIED, EVEN IF THEY ARE BLANK.)

THE FOLLOWING ARE RECOGNIZED FOR ANY B1:

CPU - MACHINE JOB IS RUNNING ON
 (E700/6E00/6400/CY74)

DATE - CURRENT DATE

MF - MAINFRAME JOB IS RUNNING ON
 (MFA/MFB/MFC/MFD)

TIME - CURRENT TIME

CONSOL - TTY LIST OF BANNERS PRINTED
 (0 - OMIT LIST)

DEFAULT EXECUTE CARD
 BANNERS, INPUT, OUTPUT.

-OR-

BEGIN, BANNERS, , OUTPUT, NBANR=0, B1=CPU, B2=DATE, B3=TIME.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 36000B
 FL NEEDED TO RUN : 24000B

DATA CARD

FREE-FORMAT (LIST-DIRECTED) WITH FIELDS SEPARATED BY COMMAS:

FIELD	CONTENTS
1	NUMBER OF BANNERS (0-8)
2	BANNER 1 (ENCLOSED IN QUOTES (" "))
3	BANNER 2 (ENCLOSED IN QUOTES (" "))
4	BANNER 3 (ENCLOSED IN QUOTES (" "))
5	BANNER 4 (ENCLOSED IN QUOTES (" "))
6	BANNER 5 (ENCLOSED IN QUOTES (" "))
7	BANNER 6 (ENCLOSED IN QUOTES (" "))
8	BANNER 7 (ENCLOSED IN QUOTES (" "))
9	BANNER 8 (ENCLOSED IN QUOTES (" "))

E.G., 3, "BANR1", "BANR2", "BANR3", " ", " ", " ", " ", " ", " "

NOTE: IF A SECOND CARD IS NEEDED, BREAK AFTER A COMMA.

E.G., 7, "BANR1", "BANR2", "BANR3", "BANR4",
 "BANR5", "BANR6", "BANR7", " "

INPUT/OUTPUT UNIT #	UNITS LFN	USE
3	CONSOL	LIST OF BANNERS AT TTY (RETURNED AT END OF PROGRAM)
	INPUT	OPTIONAL INPUT FILE WITH BANNERS
	OUTPUT	LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE	AND	CONNEC	DATE	MAX	MIN
SHIFT		TIME			
OTHERS					
BANR	-	WRITE A 20-LINE BANNER			
BANR6	-	WRITE A 10-LINE BANNER			
IFMTV	-	FAST VARIABLE I-FORMAT DECODE			
MFRAME	-	GET THIS CPU AND MAINFRAME			
MOVEIT	-	MOVE AN ARRAY			
UNLOAD	-	RETURN,CONSOL			

AUTHORS

DAVID V SOMMER - DTNSRDC CODE 1892.2 - ORIGINAL 3-BANNER PROGRAM

GARY L STUMP - DTNSRDC CODE 2731 - 8-BANNER PROGRAM

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 03/22/78 - GLS

DATE(S) REVISED

06/23/78 - DVS - ADD BANNERS TO EXECUTE CARD

01/15/81 - DVS - ADD 'MF' AND CY74 RECOGNITION

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM ' BANNER3'

PURPOSE

PRINT 3 BANNERS ON ONE PAGE

FUNCTIONAL CATEGORIES: J4

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

NONE

EXECUTION

FROM BATCH

BEGIN,UTILITY,,BANNER3,OUTPUT,<PARAMS>.

FROM TTY

ATTACH,UTILITY.

LIBRARY,UTILITY.

BANNER3.OUT,<PARAMS>.

(USUALLY MORE OUTPUT IS WRITTEN ONTO OUT)

ROUTE,OUT,DC=PR,....

EXECUTE CARD PARAMETERS

BANNER3.OUTPUT,BANR1,BANR2,BANR3.

OUTPUT - LISTABLE OUTPUT

BANR1 - FIRST BANNER (1-7 CHARACTERS)

BANR2 - SECOND BANNER (1-7 CHARACTERS)

BANR3 - THIRD BANNER (1-7 CHARACTERS)

THE FOLLOWING ARE RECOGNIZED FOR ANY BANR-N:

CPU - BANNER IS MACHINE JOB IS RUNNING ON
(6700/6600/6400/CY74)

DATE - BANNER IS CURRENT DATE

MF - BANNER IS MAINFRAME JOB IS RUNNING ON
(MFA/MFB/MFC/MFD)

TIME - BANNER IS CURRENT TIME

DEFAULT EXECUTE CARD

BANNER3.OUTPUT,CPU,DATE,TIME.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 27000B

FL NEEDED TO RUN : 16000B

OUTPUT UNIT

UNIT #	LFN	USE
-----	-----	-----
	OUTPUT	LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED
PART OF LANGUAGE
AND DATE TIME
OTHERS

BANR - WRITE A BANNER
GETLFNS - GET ACTUAL LOCAL FILE NAMES
MFRAME - GET THIS CPU AND MAINFRAME

ARITHMETIC STATEMENT FUNCTIONS
L82FMT - FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)

AUTHOR
DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 05/11/77

DATE(S) REVISED
02/10/78 - 'TIME' CORRECTED
01/15/81 - ADD 'MF' AND CY74 RECOGNITION

LOCATION OF DECKS
SOURCE
UPDATE LIBRARY: UTILITYPL.ID=CSYS
OBJECT
EDITLIB USER LIBRARY: UTILITY

PROGRAM 'BANNER6'

PURPOSE

PRINT 3-6 BANNERS ON ONE PAGE

FUNCTIONAL CATEGORIES: J4

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

NONE

EXECUTION

FROM BATCH

BEGIN,UTILITY,,BANNER6,OUTPUT,<PARAMS>.

FROM TTY

ATTACH,UTILITY.

LIBRARY,UTILITY.

BANNER6,OUT,<PARAMS>.

(USUALLY MORE OUTPUT IS WRITTEN ONTO OUT)

ROUTE,OUT,DC=PR,....

EXECUTE CARD PARAMETERS

BANNER6,OUTPUT,BANR1,BANR2,BANR3,BANR4,BANR5,BANR6.

OUTPUT - LISTABLE OUTPUT

BANR1 - FIRST BANNER (1-7 CHARACTERS)

BANR2 - SECOND BANNER (1-7 CHARACTERS)

BANR3 - THIRD BANNER (1-7 CHARACTERS)

BANR4 - FOURTH BANNER (1-7 CHARACTERS)

(IF OMITTED OR 'DUMMY4', A BLANK BANNER IS WRITTEN)

BANR5 - FIFTH BANNER (1-7 CHARACTERS)

(IF OMITTED OR 'DUMMY5', A BLANK BANNER IS WRITTEN)

BANR6 - SIXTH BANNER (1-7 CHARACTERS)

(IF OMITTED OR 'DUMMY6', A BLANK BANNER IS WRITTEN)

THE FOLLOWING ARE RECOGNIZED FOR ANY BANR-N:

CPU - BANNER IS MACHINE JOB IS RUNNING ON
(6700/6600/6400/CY74)

DATE - BANNER IS CURRENT DATE

MF - BANNER IS MAINFRAME JOB IS RUNNING ON
(MFA/MFB/MFC/MFD)

TIME - BANNER IS CURRENT TIME

DEFAULT EXECUTE CARD

BANNER6,OUTPUT,CPU,DATE,TIME.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 27000B

FL NEEDED TO RUN : 15000B

OUTPUT UNIT

UNIT #

LFN

USE

OUTPUT

LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND DATE TIME

OTHERS

BANR6 - WRITE A BANNER (6 LINES HIGH)

GETLFNS - GET ACTUAL LOCAL FILE NAMES

MFRAME - GET THIS CPU AND MAINFRAME

ARITHMETIC STATEMENT FUNCTIONS

L82FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 10/18/77

DATE(S) REVISED

01/15/81 - ADD 'MF' AND CY74 RECOGNITION

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'BINDEX'

PURPOSE

GIVE LIST AND SORTED LIST OF OUTPUT OF EDITLIB 'LISTLIB'
AND 'CONTENT' DIRECTIVES

FUNCTIONAL CATEGORIES: Q7

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

'CONTENT' AND 'LISTLIB' DIRECTIVES SHOULD NOT BE MIXED IN
THE SAME EDITLIB. MULTIPLE 'LISTLIB' DIRECTIVES
MAY BE USED IN ONE EDITLIB. ONLY ONE 'CONTENT' DIRECTIVE
SHOULD BE USED IN AN EDITLIB.

EXECUTION

FROM BATCH

```
ATTACH,LFN,.... (FILE/LIBRARY TO BE 'BINDEXED')
EDITLIB,L=TAPE1.
BEGIN,UTILITY,,BINDEX.
' 7/8/9 EOR
  (EDITLIB LISTLIB OR CONTENT DIRECTIVES)
ENDRUN.
" 6/7/8/9 EOI
```

FROM TTY

```
ATTACH,LFN,.... (FILE/LIBRARY TO BE 'BINDEXED')
CONNECT,INPUT
EDITLIB,L=TAPE1.
  (ENTER EDITLIB LISTLIB OR CONTENT DIRECTIVES)
ENDRUN.
(PERCENT) EOF
BEGIN,UTILITY,,BINDEX,,OUT.
ROUTE,OUT,DC=PR,....
```

EXECUTE CARD PARAMETERS

```
BINDEX,TAPE1,OUTPUT,FILENAME,SIZE,!LEFT,SORT.
TAPE1      - INPUT FILE
              (OUTPUT OF EDITLIB)
OUTPUT     - LISTABLE OUTPUT
FILENAME   - FILE NAME FOR HEADING
              USED WHEN TAPE1 IS OUTPUT OF 'CONTENT'
              DIRECTIVE. IS MISSING, 'BINARY FILE' IS
              USED.
SIZE       - ESTIMATED NUMBER OF FILES LISTED ON
              TAPE1. RANGE IS 20-2000.
              DEFAULT: 20.
LEFT       - PRINT CENTERING
              LEFT OR MISSING - PRINT LEFT-ADJUSTED ON
              PAGE
              OTHER           - PRINT IN CENTER OF PAGE
SORT       - IF OMITTED OR 'SORT' - PRINT SORTED LIST(S)
              IF ANYTHING ELSE - PRINT FIRST LIST ONLY
```

DEFAULT EXECUTE CARD

```
BINDEX,TAPE1,OUTPUT,'BINARY FILE',20,LEFT,SORT.
```

FL NEEDED TO LOAD: 31000B
 FL NEEDED TO RUN : 21000B (MINIMUM)
 (PROGRAM GETS CORE AS IT IS NEEDED)

INPUT/OUTPUT UNITS		USE
UNIT #	LFN	
1	OUTPUT TAPE1	LISTABLE OUTPUT INPUT FILE (OUTPUT OF EDITLIB 'LISTLIB' OR 'CONTENT' DIRECTIVE)

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE
 AND EOF MAXO MINO MOD
 MOVLEV OR RECOVER REMARK SHIFT

PART OF PROGRAM
 ECJ - ABNORMAL TERMINATION ROUTINE
 PRINTIT - PRINT ORIGINAL LISTING
 SORTIT - SORT AND PRINT ADDITIONAL LISTINGS

OTHERS
 ASORTMV - SORT 2 DIMENSIONAL ARRAY
 FTNRFL - GET CURRENT FL
 GETLFNS - GET ACTUAL LOCAL FILE NAMES
 IFMTV - FAST VARIABLE I-FORMAT DECODE
 ISITCNF - TEST FOR CONNECTED FILE
 REDUCE - GET CORE AS REQUIRED
 REPLAC - REPLACE ONE CHARACTER BY ANOTHER

ARITHMETIC STATEMENT FUNCTIONS

FAST A-FORMAT DECODES
 A22FMT A55FMT A62FMT A63FMT
 FAST L-FORMAT DECODES (LEFT-ADJ, ZERO-FILLED)
 L43FMT L45FMT L71FMT L76FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 02/06/75

DATE(S) REVISED

03/03/75
 11/03/75
 04/08/75
 10/22/76 - BYPASS PAGE HEADINGS WHEN ENTRY POINTS ARE ON TWO
 PAGES. ADD THE PAGE NUMBER FROM THE EDITLIB
 LISTING TO THE FIRST LIST IN COLUMNS 118-120. IF
 THE OUTPUT FILE IS CONNECTED TO A TELETYPE AND
 LEFT JUSTIFICATION IS REQUESTED, COLUMNS 70-72
 ARE USED.

02/15/78 - ADD SUPPORT FOR PROCEDURES

LOCATION OF DECKS

SOURCE
 UPDATE LIBRARY: UTILITYPL.ID=CSYS
 OBJECT
 EDITLIB USER LIBRARY: UTILITY

PROGRAM 'CALCIBL'

PURPOSE

CALCULATE BEST BLOCK LENGTHS (I.E. - MIN TIME REQUIRED FOR RANDOM ACCESS AND MINIMUM BUFFER SIZE) FOR INDEX SEQUENTIAL FILE

FUNCTIONAL CATEGORIES: Q0

LANGUAGE: FORTRAN IV

REMARKS

THIS PROGRAM ASKS THE USER FOR INPUT VALUES, THEN CALLS THE IBL FUNCTION TO PERFORM THE CALCULATION OF BEST BLOCK SIZES. REFER TO WRITE-UP OF IBL IN CCLIB/II FOR DISCUSSION OF ASSUMPTIONS USED IN DERIVING FORMULA FOR BEST BLOCK LENGTH.

EXECUTION

FROM TTY
SCREEN,80
CONNECT,INPUT,OUTPUT
BEGIN,UTILITY..CALCIBL

PROGRAM WILL PROMPT USER FOR INPUT. WILL ASK FOR ONE LINE OF DATA VALUES OF THE FORM:

FLM,RL,KL,IP,DP,MRL

WHERE FLM IS THE NUMBER OF RECORDS THE FILE IS TO
CONTAIN (1 TO 7 DIGITS)
RL IS THE AVERAGE LENGTH OF A RECORD IN
CHARACTERS (1 TO 3 DIGITS)
KL IS THE KEY LENGTH IN CHARACTERS
(1 OR 2 DIGITS)
IP IS THE INDEX PADDING PERCENT
(1 OR 2 DIGITS)
DP IS THE DATA PADDING PERCENT
(1 OR 2 DIGITS)
MRL IS THE MAXIMUM RECORD LENGTH IN
CHARACTERS (1 TO 3 DIGITS)

IF ZERO OR NULL VALUE IS GIVEN FOR A PARAMETER, THE FOLLOWING DEFAULT VALUES ARE USED:

FLM - 100000
RL - MRL
KL - 15
IP - 5
DP - 0
MRL - 70

OUTPUT FORMAT

THE OUTPUT FROM CALCIBL IS A SHORT REPORT GIVING BEST BLOCK LENGTH FOR ONE LEVEL INDEX AND TWO LEVEL INDEX. IBL LENGTH IS GIVEN IN BOTH CHARACTERS AND PRUS. THE BUFFER SIZE REQUIRED IS GIVEN IN WORDS. RELATIVE

TIMES PER RECORD ARE GIVEN FOR RANDOM AND SEQUENTIAL ACCESS. BLOCKING FACTORS FOR INDEX AND DATA BLOCKS ARE GIVEN. MAXIMUM AND PADDED FILE SIZES (QUOTED IN NUMBER OF RECORDS) ARE GIVEN. FINALLY INPUT PARAMETER VALUES ARE PRINTED.

THE RESULTS CAN BE USED TO SELECT BLOCK LENGTHS FOR INDEX AND DATA BLOCKS. FOR INSTANCE, AFTER DECIDING ON WHETHER A 1 OR 2 LEVEL FILE IS BEST THE SIZES CAN BE SET IN COBOL VIA THE STATEMENTS
INDEX-BLOCK CONTAINS ____ CHARACTERS
DATA-BLOCK CONTAINS ____ CHARACTERS
IN THE SELECT CLAUSE FOR THE FILE.

FL NEEDED TO LOAD: 30000B
FL NEEDED TO RUN : 17000B

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED
PART OF LANGUAGE
NONE
PART OF PROGRAM
IBL - PERFORM BEST BLOCK CALC AND PRINT REPORT
OTHERS
NONE

AUTHOR
BRUCE D. BLACK - DTNSRDC CODE 1892.1

DATE WRITTEN: 04/03/78

DATE(S) REVISED

LOCATION OF DECKS
SOURCE
UPDATE LIBRARY: UTILITYPL.ID=CSYS
OBJECT
EDITLIB USER LIBRARY: UTILITY

PROGRAM 'CARDS'

PURPOSE

REPRODUCE A BCD DECK WITH MODIFICATIONS. (FIELDS MAY BE
MOVED, DELETED, INTERCHANGED, GANG PUNCHED AND/OR SEQUENCED)

FUNCTIONAL CATEGORIES: 01

REMARKS

- 1) UP TO 5 FIELDS MAY BE INTERCHANGED
- 2) UP TO 10 FIELDS MAY BE MOVED AND REPLACED BY BLANKS
- 3) UP TO 5 FIELDS MAY BE DELETED
- 4) GANG PUNCHING OF UP TO 65 COLUMNS MAY BE INSERTED
IN A FIXED FIELD
- 5) SEQUENCING MAY BE PERFORMED IN A FIELD OF UP TO
10 COLUMNS
- 6) OPTIONS MAY BE SPECIFIED IN ANY ORDER, BUT ARE PROCESSED
AS FOLLOWS:
 - A) ALL SWAPS, IN THE ORDER READ
 - B) ALL MOVES, IN THE ORDER READ
 - C) ALL DELETES, IN THE ORDER READ
 - D) ALL GANGPUNCHING, IN THE ORDER READ
 - E) SEQUENCING IS PUT IN

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

DATE EOF

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES

ARITHMETIC STATEMENT FUNCTIONS

NONE

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

FORTRAN LOGICAL UNIT	LOCAL FILE NAME
----------------------------	-----------------------

USE

5

INPUT

INPUT FILE CONTAINING FIELD CONTROL
CARDS AND THE DECK TO BE REPRODUCED
LISTABLE OUTPUT
PUNCHED OUTPUT

OUTPUT
PUNCH

EXECUTION

FROM BATCH

ATTACH,UTILITY.
 LDSET,LIB=UTILITY.
 CARDS.
 ' 7/8/9 EOR
 (FIELD CONTROL CARDS)
 (BLANK CARD OR 7/8/9)
 (DECK TO BE REPRODUCED)
 " 6/7/8/9 EOF

FROM TTY

ATTACH,IN,.... (FIELD CONTROL CARDS AND DECK)
 ATTACH,UTILITY.
 LIBRARY,UTILITY.
 CARDS,IN,OUT.
 ROUTE,OUT,DC=PR,TID=....
 ROUTE,PUNCH,DC=PU,TID=....

EXECUTE CARD PARAMETERS

CARDS,INFILE,OUTPUT,PUNCH,LIST.
 INFILE - INPUT FILE CONTAINING FIELD CONTROL
 CARDS AND THE DECK TO BE REPRODUCED
 OUTPUT - LISTABLE OUTPUT
 PUNCH - PUNCHED OUTPUT
 LIST - PRINT OPTION
 OMITTED OR 'LIST' - LIST CARDS
 ANYTHING ELSE - DO NOT LIST CARDS

DEFAULT EXECUTE CARD

CARDS,INPUT,OUTPUT,PUNCH,LIST.

FL NEEDED TO LOAD: 26000B

DATA CARDS

ONE OR MORE FIELD CONTROL CARDS FOLLOWED BY A BLANK CARD
 (OR 7/8/9 END-OF-RECORD) FOLLOWED BY THE DECK TO BE
 REPRODUCED.

FIELD CONTROL CARDS

COL	CONTENTS
1	TYPE OF MODIFICATION D - DELETE E - ENDPUNCH (SEQUENCE) G - GANG PUNCH M - MOVE S - SWAP (INTERCHANGE)
2-3	BLANK
4-15	UP TO FOUR (4) 3-COLUMN INTEGER PARAMETERS (I1 I2 I3 I4)
16-80	ALPHAMERIC TEXT FIELD, LEFT-JUSTIFIED ('G' TYPE ONLY)

MODIFICATION TYPES

D	11 12		DELETE COLUMNS 11 THRU 12 AND REPLACE WITH BLANKS
E	11 12 13 14		PUT SEQUENTIAL NUMBERS INTO COLUMNS 11 THRU 12, RIGHT- JUSTIFIED, ZERO-FILLED, BEGINNING WITH 13, INCREMENTING BY 14 (DEFAULT: E 77 80 10 10)
G	11 12	TEXT...	REPLACE COLUMNS 11 THRU 12 WITH THE SPECIFIED TEXT FIELD (DEFAULT: G 73 76)
M	11 12 13 14		MOVE FIELD IN COLUMNS 11 THRU 12 TO FIELD IN COLUMNS 13 THRU 14 AND BLANK THE FORMER FIELD (14 MAY BE OMITTED)
S	11 12 13 14		SWAP FIELD IN COLUMNS 11 THRU 12 WITH FIELD IN COLUMNS 13 THRU 14. (14 MAY BE OMITTED)

AUTHORS

SHARON E GOOD - NSRDC CODE 1892.1
DAVID V SOMMER - NSRDC CODE 1892.2

DATE WRITTEN: 12/72

DATE(S) REVISED
07/16/75

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'CARDS2'

PURPOSE

REPRODUCE A BCD DECK WITH MODIFICATIONS. (FIELDS MAY BE COPIED, MOVED, DELETED, INTERCHANGED, GANG PUNCHED AND/OR SEQUENCED.)

FUNCTIONAL CATEGORIES: 01

REMARKS

- 1) UP TO 10 FIELDS MAY BE COPIED
- 2) UP TO 10 FIELDS MAY BE INTERCHANGED
- 3) UP TO 10 FIELDS MAY BE MOVED AND REPLACED BY BLANKS
- 4) UP TO 10 FIELDS MAY BE DELETED
- 5) GANG PUNCHING OF UP TO 65 COLUMNS MAY BE INSERTED IN A FIXED FIELD
- 6) SEQUENCING MAY BE PERFORMED IN A FIELD OF UP TO 10 COLUMNS
- 7) OPTIONS ARE PERFORMED IN THE FOLLOWING ORDER:
 - A) ALL COPIES, IN THE ORDER READ
 - B) ALL DELETES, IN THE ORDER READ
 - C) SEQUENCING
 - D) ALL GANGPUNCHING, IN THE ORDER READ
 - E) ALL MOVES, IN THE ORDER READ
 - F) ALL SWAPS, IN THE ORDER READ

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	DATE	FILESQ	GET	IFETCH
MOVLEV	OPENM	RECOVR	SHIFT	TIME

OTHERS

EOJ	- ABNORMAL TERMINATION ROUTINE
GETLFNS	- GET ACTUAL LOCAL FILE NAMES
IFMT10	- FAST I10-FORMAT ENCODE
IOPEN	- TEST FOR RM FILE OPEN
REDUCE	- REDUCE CORE TO MINIMUM NEEDED TO RUN
REPLAC	- REPLACE ONE CHARACTER BY ANOTHER
VALID	- VALIDATE FIELD CONTROL CARDS
VFILL	- FILL ARRAY WITH WORD

ARITHMETIC STATEMENT FUNCTIONS

FAST I-FORMAT DECODES

I33FMT	I34FMT	I37FMT	I310FMT
--------	--------	--------	---------

FAST L-FORMAT DECODES (LEFT-ADJ. ZERO-FILLED)

L1FMT	L11FMT
-------	--------

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

FORTRAN	LOCAL
LOGICAL	FILE
UNIT	NAME

USE

DEK	DECK TO BE REPRODUCED
FCC	FIELD CONTROL CARDS
OUTPUT	LISTABLE OUTPUT
PUNCH	PUNCHED OUTPUT

EXECUTION

FROM BATCH

ATTACH,UTILITY.
LDSET,LIB=UTILITY.
CARDS2,INPUT,INPUT.
" 7/8/9 EOR
(FIELD CONTROL CARDS)
(BLANK CARD OR 7/8/9)
(DECK TO BE REPRODUCED)
" 6/7/8/9 EOF

FROM TTY

ATTACH,FCC,..... (FIELD CONTROL CARDS)
ATTACH,DEK,..... (DECK TO BE REPRODUCED)
ATTACH,UTILITY.
LIBRARY,UTILITY.
CARDS2,,,OUT.
ROUTE,OUT,DC=PR,TID=....
ROUTE,PUNCH,DC=PU,TID=....

EXECUTE CARD PARAMETERS

CARDS2,FCC,DEK,OUTPUT,PUNCH,OPTION.
FCC - INPUT FILE OF FIELD CONTROL CARDS
DEK - INPUT FILE OF DECK TO BE REPRODUCED
(MAY BE SAME AS FCC)
OUTPUT - LISTABLE OUTPUT
PUNCH - PUNCHED OUTPUT
OPTION - OUTPUT OPTION
OMITTED OR 'ALL' - LIST AND PUNCH
'LIST' - LIST ONLY
'PUNCH' - PUNCH ONLY
ANYTHING ELSE - NO LIST OR PUNCH
(FIELD CARDS CHECKED)

DEFAULT EXECUTE CARD

CARDS2,FCC,DEK,OUTPUT,PUNCH,ALL.

FL NEEDED TO LOAD: 32000B

(PROGRAM REDUCES TO MINIMUM NEEDED TO RUN)

DATA CARDS

ONE OR MORE FIELD CONTROL CARDS FOLLOWED BY A BLANK CARD
(OR 7/8/9 END-OF-RECORD). DECK TO BE REPRODUCED MAY
FOLLOW OR BE IN A SEPARATE FILE.

FIELD CONTROL CARDS

COL CONTENTS

1	TYPE OF MODIFICATION
	C - COPY
	D - DELETE
	E - ENDPUNCH (SEQUENCE)
	G - GANG PUNCH
	M - MOVE AND BLANK FORMER FIELD
	S - SWAP (INTERCHANGE)
2-3	BLANK
4-15	UP TO FOUR (4) 3-COLUMN INTEGER PARAMETERS (I1 I2 I3 I4)
16-80	ALPHAMERIC TEXT FIELD, LEFT-JUSTIFIED

MODIFICATION TYPES

C	I1 I2 I3		COPY FIELD IN COLUMNS I1 THRU I2 INTO FIELD STARTING AT I3. RETAIN THE FORMER FIELD.
D	I1 I2		DELETE COLUMNS I1 THRU I2 AND REPLACE WITH BLANKS.
E	I1 I2 I3 I4		PUT SEQUENTIAL NUMBERS INTO COLUMNS I1 THRU I2, RIGHT- JUSTIFIED, ZERO-FILLED, BEGINNING WITH I3. INCREMENTING BY I4.
G	I1 I2	TEXT...	REPLACE COLUMNS I1 THRU I2 WITH THE SPECIFIED TEXT FIELD. (DEFAULT: G 73 76)
M	I1 I2 I3		MOVE FIELD IN COLUMNS I1 THRU I2 TO FIELD STARTING IN I3. BLANK THE FORMER FIELD.
S	I1 I2 I3		SWAP FIELD IN COLUMNS I1 THRU I2 WITH FIELD STARTING IN I3.

NOTE: IN ALL CASES, I2 MAY NOT BE LESS THAN I1.

AUTHOR

DAVID V SOMMER - NSRDC CODE 1892.2
(BASED ON PROGRAM 'CARDS' BY SHARON E GOOD)

DATE WRITTEN: 07/21/75

DATE(S) REVISED

11/10/75
10/04/76 - CORRECT D/G OPTIONS REQUIRING I3 FIELD

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'CBLFMT'

PURPOSE

REFORMAT A COBOL SOURCE PROGRAM TO ENHANCE ITS READABILITY,
THEREBY MAKING IT EASIER TO UNDERSTAND AND MODIFY

FUNCTIONAL CATEGORIES: Q0

LANGUAGE: COBOL5

REMARKS

A TOOL OF THIS TYPE CAN BE VERY USEFUL IN BOTH MAINTENANCE
AND DEVELOPMENT ACTIVITIES.

THE MODIFICATION OF AN EXISTING PROGRAM IS FREQUENTLY
PERFORMED BY SOMEONE OTHER THAN THE PROGRAM'S AUTHOR,
AND THE ABILITY TO GRASP THE PROGRAM'S LOGIC QUICKLY IS
ESSENTIAL. IN THESE CASES, REFORMATTING THE SOURCE CAN
COMPENSATE FOR A LACK OF CLARITY IN THE ORIGINAL CODING
AND CAN GREATLY AID COMPREHENSION.

WHEN A PROGRAM IS BEING DEVELOPED, ESPECIALLY WHEN
"STRUCTURED" CODING TECHNIQUES ARE USED, A FORMATTING
TOOL CAN SAVE A CONSIDERABLE AMOUNT OF TIME. MODIFICATION
OF A NESTED CONDITIONAL STRUCTURE FREQUENTLY REQUIRES
RECODING STATEMENTS FOLLOWING THE CHANGE JUST TO
MAINTAIN PROPER RELATIVE INDENTATION. CBLFMT HANDLES
THIS PROBLEM AUTOMATICALLY.

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LIBRARY,UTILITY.

ATTACH,PROGIN,....

REQUEST,PROGOUT,*PF.

CBLFMT.

CATALOG,PROGOUT,....

REWIND,PROGOUT.

COBOL5,I=PROGOUT,....

EXECUTE REFORMAT PROGRAM

SAVE REFORMATTED PROGRAM

CALL COBOL COMPILER

FROM TTY
 DISCONT,OUTPUT. DISCONNECT OUTPUT FILE
 ATTACH,UTILITY.
 LIBRARY,UTILITY.
 ATTACH,PROGIN,....
 REQUEST,PROGOUT,*PF.
 CBLFMT.
 CATALOG,PROGOUT,....
 REWIND,PROGOUT.
 COBOL5,1=PROGOUT,....
 ROUTE,OUTPUT,DC=PR,TID=.... PRINT OUTPUT

DEFAULT EXECUTE CARD
 CBLFMT.

FL NEEDED TO LOAD: 35600B
 FL NEEDED TO RUN : 75000B

INPUT UNITS
 LFN

USE

 PROGIN SOURCE PROGRAM TO BE REFORMATTED (DISK ASSUMED).

OUTPUT UNITS
 LFN

USE

 PROGOUT REFORMATTED SOURCE PROGRAM (DISK ASSUMED).
 SUITABLE FOR PROCESSING BY COBOL COMPILER.
 OUTPUT LISTING OF OLD SOURCE PROGRAM, REFORMATTED
 PROGRAM AND ERROR MESSAGES (PRINTER ASSUMED).

METHOD

FORMATTING FUNCTIONS

1. PLACE EACH SECTION HEADER AND PROCEDURE NAME ON A SEPARATE LINE.
2. HIGHLIGHT EACH PARAGRAPH AND SECTION NAME BY PRECEDING IT WITH A BLANK COMMENT LINE (* IN COLUMN 7).
3. BEGIN EACH NEW PROCEDURE DIVISION STATEMENT ON A NEW LINE.
4. BEGIN EACH PROCEDURE DIVISION SENTENCE IN COLUMN 12 OF A NEW LINE.
5. INDENT CONTINUATION LINES OF A PROCEDURE DIVISION SENTENCE.
6. INDENT EACH SUCCEEDING "IF" STATEMENT IN A NESTED CONDITIONAL STRUCTURE.
7. ALIGN EACH "ELSE" STATEMENT WITH ITS CORRESPONDING "IF"; HIGHLIGHT THE "ELSE" BY PLACING IT ON A LINE BY ITSELF.
8. ALIGN "AND" AND "OR" LOGICAL CONNECTORS WITH THEIR ASSOCIATED "IF" IN ORDER TO CLARIFY THE CONDITIONS TO BE TESTED.
9. INDENT ALL IMPERATIVE STATEMENTS WITHIN AN "IF" CONDITIONAL STATEMENT AND BLOCK THEM ACCORDING TO THEIR NESTING LEVEL.
10. ASSIGN SEQUENCE NUMBERS TO THE REFORMATTED SOURCE PROGRAM IN COLUMNS 1-6.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

NONE

OTHERS

NONE

AUTHOR

CHARLES L. ORR

DATE WRITTEN: 1/31/80

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'COMPAR'

PURPOSE

COMPARE TWO TEXT FILES AND REPORT ANY DIFFERENCES

FUNCTIONAL CATEGORIES: MO

LANGUAGE: PASCAL

COMPUTER

CDC 6000

REMARKS

THE COMPAR DOCUMENT IS FROM THE UNIVERSITY OF MINNESOTA.
ONLY A FEW MODIFICATIONS HAVE BEEN MADE TO THE DOCUMENT
REFERENCES TO KRONOS/NOS SHOULD BE IGNORED.

NOTE THAT THE NAME HAS BEEN CHANGED TO 'COMPAR' TO AVOID
CONFUSION WITH THE NOS/BE CONTROL CARD 'COMPARE'.

EXECUTION

FROM BATCH AND TTY

ATTACH,FILEA,..... (FIRST FILE TO BE COMPARED)

ATTACH,FILEB,..... (SECOND FILE TO BE COMPARED)

ATTACH,UTILITY.

LDSET,LIB=UTILITY. -OR- LIBRARY,UTILITY.

COMPAR,FILEA,FILEB,.....

EXECUTE CARD PARAMETERS

COMPAR,FILEA,FILEB,OUTPUT,MODFILE/<OPTIONS>.

FILEA - FIRST FILE TO BE COMPARED

FILEB - SECOND FILE TO BE COMPARED

OUTPUT - LISTABLE OUTPUT

MODFILE - FILE OF UPDATE/MODIFY DIRECTIVES TO CONVERT
FILEA TO FILEB

OPTIONS - CONTROL FOR THE COMPARISON

DEFAULT EXECUTE CARD

COMPAR,FILEA,FILEB,OUTPUT,MODS/C6,D.W120.

FL NEEDED TO LOAD: 6000B

FL NEEDED TO RUN : 25000B

(PROGRAM ADJUSTS CORE AS REQUIRED)

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: PTOOLSPL,ID=CSYS.TK=****

OBJECT

EDITLIB LIBRARY: UTILITY

COMPAR - COMPARE TWO TEXTFILES AND REPORT THEIR DIFFERENCES

JAMES F. MINER
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WHAT COMPAR DOES

COMPAR IS USED TO DISPLAY THE DIFFERENCES BETWEEN TWO SIMILAR TEXTS (REFERRED TO AS "FILEA" AND "FILEB"). SUCH TEXTFILES COULD BE PASCAL SOURCE PROGRAMS, CHARACTER DATA, DOCUMENTATION, ETC.

COMPAR IS LINE-ORIENTED MEANING THE SMALLEST UNIT OF COMPARISON IS THE TEXT LINE (IGNORING TRAILING BLANKS). COMPAR GENERATES A REPORT OF DIFFERENCES (MISMATCHES OR EXTRA TEXT) BETWEEN THE TWO TEXTFILES. THE CRITERION FOR DETERMINING THE LOCALITY OF DIFFERENCES IS THE NUMBER OF CONSECUTIVE LINES ON EACH FILE WHICH MUST MATCH AFTER A PRIOR MISMATCH, AND CAN BE SELECTED AS A PARAMETER.

BY SELECTING OTHER PARAMETERS, YOU CAN DIRECT COMPAR TO RESTRICT THE COMPARISON TO VARIOUS LINewidthS, MARK COLUMN-WISE THE DIFFERENCES IN PAIRS OF MISMATCHED LINES, GENERATE TEXT-EDITOR DIRECTIVES TO BE USED TO CONVERT FILEA INTO FILEB, OR GENERATE A LISTING WHICH WILL FLAG LINES ON FILEB INDICATING THEIR ADDITION OR DELETION AS A RESULT OF THE APPLICATION OF THE EDITOR DIRECTIVES.

HOW TO USE COMPAR

COMPAR IS AVAILABLE AS AN OPERATING SYSTEM CONTROL STATEMENT ON CDC 6000/CYBER 70,170 COMPUTER SYSTEMS. THE GENERAL FORM OF THE CONTROL STATEMENT IS:

COMPAR (A,B,LIST,MODFILE/OPTIONS)

COMPAR. MEANS
COMPAR (FILEA,FILEB,OUTPUT.MODS/C6,D,W120)

"FILEA" AND "FILEB" ARE THE NAMES OF THE TWO TEXTFILES BEING COMPARED, "OUTPUT" IS THE REPORT FILE, AND "MODS" IS THE FILE NAME FOR THE GENERATION OF TEXT-EDITOR DIRECTIVES IF THE "M" OPTION IS SELECTED--SEE BELOW. THE VARIOUS OPTIONS ARE: C, D, F, M, P, AND W.

CN MATCH CRITERION ($1 \leq N \leq 100$).

C DETERMINES THE NUMBER OF CONSECUTIVE LINES ON EACH FILE WHICH MUST MATCH IN ORDER THAT THEY BE CONSIDERED AS TERMINATING A PRIOR MISMATCH. C THEREFORE AFFECTS COMPAR'S "SENSITIVITY" TO THE "LOCALITY" OF DIFFERENCES. SETTING C TO A LARGE VALUE TENDS TO PRODUCE FEWER (BUT LONGER) MISMATCHES THAN DOES A SMALL VALUE. C6 APPEARS TO GIVE GOOD RESULTS ON PASCAL SOURCE FILES, BUT MAY BE INAPPROPRIATE FOR OTHER APPLICATIONS.
DEFAULT: C6.

D REPORT DIFFERENCES.

D DIRECTS COMPAR TO DISPLAY MISMATCHES AND EXTRA TEXT BETWEEN FILEA AND FILEB IN A CLEARLY ANNOTATED REPORT. ONLY ONE OF D, F, OR M CAN BE EXPLICITLY SELECTED AT ONE TIME.
DEFAULT: SELECTED.

F SELECT FLAG-FORM OUTPUT.

F DIRECTS COMPAR TO LIST FILEB ANNOTATED WITH LINES PREFIXED BY AN "A" OR "D" INDICATING "ADDITIONS" OR "DELETIONS" RESPECTIVELY. SUCH MODIFICATIONS COULD HAVE BEEN GENERATED WITH THE M OPTION. ONLY ONE OF D, F, OR M CAN BE EXPLICITLY SELECTED AT ONE TIME.
DEFAULT: NOT SELECTED.

M PRODUCE MODS FILE.

M DIRECTS COMPAR TO PRODUCE A FILE OF "INSERT" OR "DELETE" DIRECTIVES READY FOR THE CDC MODIFY OR UPDATE TEXT EDITORS (AN "IDENT" DIRECTIVE MUST BE ADDED). THE INSERTIONS AND DELETIONS WILL CONVERT FILEA INTO FILEB. FILEA AND FILEB SHOULD BE FILES WITH SEQUENCING APPEARING IN COLUMNS BEYOND THE LINEWIDTH SPECIFIED BY THE W OPTION. THIS IS TRUE OF MODIFY AND UPDATE "COMPILE" FILES (W72 IS RECOMMENDED). SEQUENCE NUMBERS ARE OF THE FORM:

<BLANKS> IDENTNAME <BLANKS> UNSIGNEDINTEGER.

ONLY ONE OF D, F, OR M CAN BE EXPLICITLY SELECTED AT ONE TIME.

DEFAULT: NOT SELECTED.

P MARK PAIRS OF MISMATCHED LINES.

P ALTERS THE ACTION OF THE D DIRECTIVE BY MARKING DIFFERING COLUMNS IN PAIRS OF LINES WHICH MISMATCH IN SECTIONS OF EQUAL LENGTH. THIS IS ESPECIALLY USEFUL FOR COMPARING PACKED DATA FILES.

DEFAULT: NOT SELECTED.

WN SPECIFY SIGNIFICANT LINE WIDTH (LENGTH) ($10 \leq N \leq 150$).

W DETERMINES THE FIXED NUMBER OF COLUMNS OF EACH LINE WHICH WILL BE COMPARED. W IS IDEAL TO USE WHEN SEQUENCE INFORMATION IS PRESENT AT THE RIGHT EDGE OF THE TEXT FILE.

DEFAULT: W120.

EXAMPLE

SUPPOSE FILEA IS:

```
PROGRAM L2U(INPUT, OUTPUT);
(* CONVERT CDC 6/12-ASCII LOWER-CASE
   LETTERS TO UPPER CASE. *)
BEGIN
  WHILE NOT EOF(INPUT) DO
    BEGIN
      WHILE NOT EOLN(INPUT) DO
        BEGIN
          IF INPUT- <> CHR(76) THEN WRITE(INPUT-);
          GET(INPUT)
        END;
      READLN;
      WRITELN
    END;
  (*ALL DONE.*)
END.
```

AND FILEB IS:

```
PROGRAM U2L(INPUT, OUTPUT);
(* CONVERT CDC ASCII UPPER-CASE LETTERS
   TO 6/12 LOWER CASE. *)
BEGIN
  WHILE NOT EOF(INPUT) DO
    BEGIN
      WHILE NOT EOLN(INPUT) DO
        BEGIN
          IF INPUT- IN 'A'..'Z' THEN WRITE(CHR(76));
          WRITE(INPUT-);
          GET(INPUT)
        END;
      READLN;
      WRITELN
    END;
  END.
END.
```

THEN A REPORT FROM COMPAR LOOKS LIKE THIS:

COMPAR.L2U.U2L.LIST/C1,D,P.
COMPARE VERSION 3.0 CDC

78/12/31.#20.23.25.
(78/12/19)

OUTPUT OPTION = DIFFERENCES.
INPUT LINE WIDTH = 120 CHARACTERS.
MATCH CRITERION = 1 LINES.

FILEA: L2U
FILEB: U2L

MISMATCH: L2U LINES 1 THRU 3 <NOT EQUAL TO> U2L LINES 1 THRU 3:

```
A 1. PROGRAM L2U(INPUT, OUTPUT);
B 1. PROGRAM U2L(INPUT, OUTPUT);

A 2. (* CONVERT CDC 6/12-ASCII LOWER-CASE
B 2. (* CONVERT CDC ASCII UPPER-CASE LETTERS
    ~~~~~

A 3. LETTERS TO UPPER CASE. *)
B 3. TO 6/12 LOWER CASE. *)
    ~~~~~
```

MISMATCH: L2U LINE 9 <NOT EQUAL TO> U2L LINES 9 THRU 10:

```
A 9. IF INPUT~ <> CHR(76) THEN WRITE(INPUT~);
B 9. IF INPUT~ IN 'A'..'Z'! THEN WRITE(CHR(76));
B 10. WRITE(INPUT~);
```

EXTRA TEXT ON L2U, BETWEEN LINES 15 AND 16 OF U2L

```
A 15. (*ALL DONE.*)
```

HOW COMPAR WORKS

COMPAR EMPLOYS A SIMPLE BACKTRACKING-SEARCH ALGORITHM TO ISOLATE MISMATCHES FROM THEIR SURROUNDING MATCHES. THIS REQUIRES DYNAMIC STORAGE ROUGHLY PROPORTIONAL TO THE SIZE OF THE LARGEST MISMATCH. AND TIME ROUGHLY PROPORTIONAL TO THE SQUARE OF THE SIZE OF THE MISMATCH FOR EACH MISMATCH. THUS IT MAY NOT BE FEASIBLE TO USE COMPAR ON FILES WITH VERY LONG MISMATCHES.

HISTORY

COMPARE WAS DEVELOPED AS A PORTABLE PASCAL SOFTWARE TOOL BY JAMES MINER OF THE SOCIAL SCIENCE RESEARCH FACILITIES CENTER AT THE UNIVERSITY OF MINNESOTA, IN EARLY 1977. IT WAS WRITTEN IN STANDARD PASCAL AND DEVELOPED INITIALLY UNDER CDC 6000 PASCAL. ALTHOUGH THE ORIGINAL VERSION SIMPLY REPORTED DIFFERENCES IN A TEXTFILE, COMPARE WAS DESIGNED TO FIT NATURALLY INTO A LARGER TEXT-EDITING SYSTEM. PLANS FOR COMPARE'S ACCOMMODATING LATER ENHANCEMENTS TO GENERATE TEXT-EDITOR DIRECTIVES WERE MADE FROM THE BEGINNING. IN SUMMER OF 1977, JOHN STRAIT AT THE UNIVERSITY OF MINNESOTA COMPUTER CENTER ADAPTED COMPARE NOT ONLY TO GENERATE SUCH A MODIFICATIONS FILE, BUT ALSO FLAG-FORM OUTPUT AND USER-SELECTABLE OPTIONS.

COMPARE HAS BEEN DISTRIBUTED TO SEVERAL PASCAL ENTHUSIASTS IN THE UNITED STATES WHO HAVE MADE IT OPERATIONAL ON OTHER PASCAL IMPLEMENTATIONS. SEE PASCAL NEWS #12, MAY, 1978, PAGES 20-23. IN LATE 1978, WILLETT KEMPTON OF THE ANTHROPOLOGY DEPARTMENT AT THE UNIVERSITY OF CALIFORNIA BERKELEY, INSTALLED COMPARE (WITH NO CHANGES REQUIRED WHATSOEVER) UNDER BERKELEY UNIX PASCAL ON A PDP 11/70 COMPUTER SYSTEM. HE LATER ADAPTED THE PROGRAM TO NOTE COLUMN-WISE DIFFERENCES IN PAIRS OF DIFFERENT LINES AND MADE MINOR CHANGES TO THE FORMAT OF THE REPORT.

RICK MARCUS AND ANDY MICKEL AT THE UNIVERSITY OF MINNESOTA COMPUTER CENTER MADE MINOR ENHANCEMENTS TO COMPARE AND FULLY DOCUMENTED IT FOR RELEASE 3 OF PASCAL 6000 IN DECEMBER, 1978.

COMPARE SERVES AS A MODEL PROGRAM IN MANY RESPECTS. IT SERVES TO ILLUSTRATE JUST HOW POWERFUL AND FLEXIBLE SUCH A COMPARISON PROGRAM CAN BE.

AT DTNSRDC, COMPARE HAS BEEN RENAMED COMPAR TO AVOID CONFLICT WITH THE NOS/BE COMMAND COMPARE.

PROGRAM 'COPYEXT'

PURPOSE

COPY UNIT RECORDS (ZERO BYTE TERMINATED) EXTRACTING
SPECIFIED COLUMNS AND OPTIONALLY MOVING THEM AND OPTIONALLY
ADD EDITOR SEQUENCING

FUNCTIONAL CATEGORIES: 01 M4

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

DEFAULT IS TO COPY FIRST 72 COLUMNS.

EXECUTION

FROM BATCH

ATTACH,TAPE1,.... (FILE TO BE COPIED)
ATTACH,UTILITY.
LIBRARY,UTILITY.
COPYEXT,...<PARAMETERS>.
(DO SOMETHING WITH TAPE2)

FROM TTY

ATTACH,TAPE1,.... (FILE TO BE COPIED)
BEGIN,UTILITY,.,COPYEXT,...<PARAMETERS>.
(DO SOMETHING WITH TAPE2)

EXECUTE CARD PARAMETERS

COPYEXT, INFILE,OUTFILE,REW, FROM,TO,AT,EDITSEQ,START,INCR,
OUTPUT.

INFILE - INPUT FILE TO BE COPIED
OUTFILE - OUTPUT FILE (NOT REWOUND)
REW - INFILE REWIND OPTION
A - REWIND AFTER USE
B - REWIND BEFORE USE
R - REWIND BEFORE AND AFTER USE
U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE
OTHER - NO REWIND (DEFAULT)
(ANY WORDS BEGINNING WITH THESE LETTERS
WILL PRODUCE THE SAME RESULTS)
FROM - STARTING COLUMN FOR EXTRACTING
(1-140; DEFAULT: 1)
(TO COPY COLUMN 1. IN ADDITION TO THE FIELD
SPECIFIED, ENTER FROM AS A NEGATIVE NUMBER.
BECAUSE - IS A SPECIAL CHARACTER, WHEN USED,
THIS PARAMETER MUST BE ENCLOSED IN \$...\$.
THIS IS USEFUL IN COPYING A DOCUMENT TO ALSO
COPY THE CARRIAGE CONTROL CHARACTER. SEE
EXAMPLE 3.)
TO - ENDING COLUMN FOR EXTRACTING
(1-140; DEFAULT: 72)
AT - FIRST COLUMN IN OUTFILE FOR EXTRACTED
RECORD (1-140; DEFAULT: 1)

EDITSEQ - EDITOR SEQUENCING OPTION
 'E' - ADD EDITOR SEQUENCING
 ANYTHING ELSE - NO EDITOR SEQUENCING
 START - STARTING SEQUENCE NUMBER
 (DEFAULT: 100)
 INCR - SEQUENCING INCREMENT
 (DEFAULT: 10)
 OUTPUT - LISTABLE OUTPUT (FTN ERROR MESSAGES)

DEFAULT EXECUTE CARD
 COPYEXT,TAPE1,TAPE2,NOREW,1,72,1,NOEDSEQ,100,1,OUTPUT.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 30000B
 FL NEEDED TO RUN : 20000B

ERROR MESSAGES

CANNOT COPY ALL CHARACTERS
 THE SPECIFIED FIELD (FROM THRU TO) WILL NOT FIT IN
 OUTFILE STARTING AT COLUMN AT. ONLY 141-AT COLUMNS
 WILL BE MOVED.
 FROM GT TO
 NEGATIVE FIELD SIZE NOT VALID - JOB TERMINATED
 INCR INVALID - 10 USED
 USER SPECIFIED A NON-POSITIVE-INTEGER FOR EDITOR
 SEQUENCING INCREMENT. DEFAULT OF 10 IS USED.
 INPUT FILE EMPTY
 INPUT FILE AT EOF -- JOB TERMINATED
 IF REW=B, R OR U WAS SPECIFIED, FILE HAS NO INFORMATION
 IN IT.
 START INVALID - 100 USED
 USER SPECIFIED A NON-POSITIVE-INTEGER FOR STARTING EDITOR
 SEQUENCE NUMBER. DEFAULT OF 100 USED.

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
-----	-----	-----
	OUTPUT	FTN ERROR MESSAGES
	TAPE1	INPUT FILE TO BE COPIED
	TAPE2	OUTPUT FILE (NOT REWOUND)
	DAYFILE	PROGRAM ERROR MESSAGES

EXAMPLES

1. COPY A COMPILE FILE AND REMOVE IDENTIFICATION COLUMNS (73 ON):
 COPYEXT,INFILE,OUTFILE,R.
2. EXTRACT A FORTRAN SOURCE PROGRAM FROM AN OUTPUT LISTING
 (NOTE THAT PAGE HEADING RECORDS WILL HAVE TO BE REMOVED
 BY THE USER):
 COPYEXT,INFILE,OUTFILE,R,20,91. (72 COLUMNS)
3. MOVE COLUMNS 10-72 OF A DOCUMENT TO COLUMNS 2 ON AND
 RETAIN THE CARRIAGE CONTROL CHARACTERS:
 COPYEXT,INFILE,OUTFILE,R,9-105,,2.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED
PART OF LANGUAGE

CLOSEM	FILESQ	GET	IFETCH	MAXO
MIND	OPENM	PUT	REMARK	WEOR

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
IFMTV - FAST VARIABLE I-FORMAT DECODE
IPAKLFT - SQUEEZE LEFT AND REMOVE BLANKS
LASTC - FIND LAST NON-BLANK CHARACTER
MOVSTR - MOVE CHARACTER STRING
PUTCHA - INSERT CHARACTER INTO ARRAY
SETREW - DECODE REWIND OPTION
VFILL - FILL ARRAY WITH WORD

ARITHMETIC STATEMENT FUNCTIONS

L11FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
R11FMT - FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 02/25/77

DATE(S) REVISED

11/04/77 - ADD NEGATIVE 'FROM' TO ALSO COPY COL 1

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'COPYLIB'

PURPOSE

FROM AN EDITLIB LISTLIB LISTING, CREATE SORTED (OR UNSORTED)
DIRECTIVES TO COPY AN EDITLIB USER LIBRARY

FUNCTIONAL CATEGORIES: K3

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

FOR EDITLIB SYSTEM LIBRARIES, USE PROGRAM USYSLIB.

EXECUTION

FROM BATCH AND TTY
USE PUBLIC PROCEDURE 'COPYLIB'.

EXECUTE CARD PARAMETERS

COPYLIB,INFILE,LIBDIR,NEWLIB,SORT,OUTPUT.
INFILE - INPUT FILE CONTAINING EDITLIB LISTLIB LIST
LIBDIR - OUTPUT FILE CONTAINING THE UPDATE
DIRECTIVES
NEWLIB - LFN OF NEW LIBRARY
SORT - OMITTED OR 'SORT' - SORT ROUTINE NAMES
ANYTHING ELSE - DO NOT SORT
OUTPUT - FTN ERROR MESSAGES

DEFAULT EXECUTE CARD

COPYLIB,TAPE1,LIBDIR,NEWLIB,SORT,OUTPUT.

FL NEEDED TO LOAD: 35000B

FL NEEDED TO RUN : 25000B

(PROGRAM ADJUSTS CORE AS REQUIRED)

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
	LIBDIR	OUTPUT FILE CONTAINING EDITLIB DIRECTIVES
	NEWLIB	FILE TO CONTAIN NEW LIBRARY (PF SPACE IS OBTAINED BUT NOTHING IS WRITTEN ON THE FILE)
1	OUTPUT TAPE1	LISTABLE OUTPUT (FTN ERROR MESSAGES) INPUT FILE CONTAINING EDITLIB LISTLIB LISTING

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	FILESQ	GET	IFETCH	MOVLEV
OPENM	PUT	REMARK		

OTHERS

ASORTMV - SORT ARRAY USING MOVLEV
GETLFNS - GET ACTUAL LOCAL FILE NAMES
LEFTADJ - SQUEEZE LEFT AND REMOVE BLANKS AND OOB
MOVSTR - MOVE A STRING OF CHARACTERS
PUTCHA - INSERT A CHARACTER INTO AN ARRAY
REDUCE - ADJUST CORE UP AND DOWN
REPLAC - REPLACW ONE CHARACTER WITH ANOTHER
REQUEST - REQUEST,NEWLIB,*PF.

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L11FMT L61FMT L81FMT
FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)
R110FMT R47FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 11/15/76

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'COPYRE'

PURPOSE

COPY AND REARRANGE FILE OF ZERO BYTE TERMINATED RECORDS
(150 CHARACTERS MAXIMUM PER RECORD)

FUNCTIONAL CATEGORIES: 01 K1

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

UP TO 500 RANGE PAIRS (CARDS) CAN BE PROCESSED AT A TIME.

EXECUTION

FROM BATCH

ATTACH,TAPE1,.... (FILE TO BE COPIED AND RE-ARRANGED)
ATTACH,UTILITY.
LDSET,LIB=UTILITY.
COPYRE.
CATALOG,TAPE2,....
' 7/8/9 EOR
(RANGE CARDS. END WITH 0,0)
" 6/7/8/9 EOF

FROM TTY

ATTACH,TAPE1,.... (FILE TO BE COPIED AND RE-ARRANGED)
ATTACH,UTILITY.
LIBRARY,UTILITY.
CONNECT,INPUT,OUTPUT.
REQUEST,TAPE2,*PF.
COPYRE.
(ENTER RANGES - THERE IS NO PROMPTING - END WITH 0,0)
CATALOG,TAPE2,....

EXECUTE CARD PARAMETERS

COPYRE,INPUT,INFILE,OUTFILE,REW,OUTPUT.
INPUT - RANGE CARD INPUT FILE
INFILE - FILE TO BE COPIED AND RE-ARRANGED
OUTFILE - OUTPUT (RE-ARRANGED) FILE
REW - INFILE REWIND OPTION
A - REWIND AFTER USE
B - REWIND BEFORE USE
R - REWIND BEFORE AND AFTER USE
U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE (IF ABEND, U IS CHANGED
TO R)
OTHER - NO REWIND (DEFAULT)
(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS.)
OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

COPYRE,INPUT,TAPE1,TAPE2,NOREW,OUTPUT.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 34000B

FL NEEDED TO RUN : 24000B

(PROGRAM ADJUSTS CORE UP AND DOWN AS REQUIRED)

DATA CARDS

RANGE SPECIFICATION CARDS ARE FREE-FORM. EACH CARD MUST CONTAIN TWO (2) NUMBERS, EVEN IF THE SECOND IS 0, SEPARATED BY A COMMA (,).

THE FIRST NUMBER IS THE STARTING RECORD NUMBER.

THE SECOND NUMBER IS THE ENDING RECORD NUMBER.

IF R1 GT R2, PROGRAM ABORTS.

IF R1 GT MAXIMUM NUMBER OF RECORDS IN INFILE, PROGRAM ABORTS.

IF R2 GT MAXIMUM NUMBER OF RECORDS IN INFILE, THE MAXIMUM NUMBER IS SUBSTITUTED.

IF R2 IS 0, R1 IS SUBSTITUTED.

IF R1 IS 0, IT SIGNALS THE END OF THE RANGE CARDS.

END RANGE CARDS WITH 0,0.

ERROR MESSAGES

INVALID RANGE - FATAL

SECOND RANGE VALUE MUST BE ZERO OR GREATER THAN FIRST VALUE

MORE THAN 500 RANGES

PROGRAM CAN HANDLE ONLY 500 RANGE PAIRS AT A TIME

NO RANGES SPECIFIED

SELF-EXPLANATORY

INPUT/OUTPUT UNITS

UNIT # LFN

USE

INPUT

RANGE CARDS INPUT FILE

OUTPUT

LISTABLE OUTPUT

TAPE1

FILE TO BE COPIED AND RE-ARRANGED

TAPE2

OUTPUT (RE-ARRANGED) FILE

METHOD

1. READ RANGE CARDS.

2. READ INPUT FILE INTO CORE.

3. VERIFY AND LIST RANGES.

4. IF ALL RANGES VALID, COPY FILE AS REQUESTED.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	EOF	FILESQ	GET	IFETCH
MOVLEV	OPENM	PUT	RECOVR	REMARK

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

FTNRFL - GET CURRENT FIELD LENGTH
GETLFNS - GET ACTUAL LOCAL FILE NAMES
LASTC - FIND LAST NON-BLANK CHARACTER
REDUCE - ADJUST CORE AS REQUIRED
SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

NONE

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 03/30/76

DATE(S) REVISED

04/02/76

04/26/76

05/20/76 - INCREASE TO 150 CHARACTER RECORDS

12/11/78 - INCREASE TO 500 RANGE PAIRS

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'COPYSEL'

PURPOSE

COPY AND REARRANGE FILE OF ZERO BYTE TERMINATED RECORDS
(150 CHARACTERS MAXIMUM PER RECORD; FILE PROCESSED DIRECTLY)

FUNCTIONAL CATEGORIES: 01 K1

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

'COPYSEL' IS SIMILAR TO 'COPYRE'. 'COPYSEL' WORKS DIRECTLY WITH INFILE; 'COPYRE' READS THE ENTIRE FILE INTO CORE FIRST. USE 'COPYSEL' IF INFILE IS TO BE PROCESSED, FOR THE MOST PART, IN THE FORWARD DIRECTION. USE 'COPYRE' IF THERE IS A MUCH RE-ARRANGING TO BE DONE. USE 'COPYSEL' IF INFILE IS TOO LARGE FOR 'COPYRE'.

EXECUTION

FROM BATCH

```
ATTACH,TAPE1,..... (FILE TO BE COPIED AND RE-ARRANGED)
ATTACH,UTILITY.
REQUEST,TAPE2,*PF.
LDSET,LIB=UTILITY.
COPYSEL.
CATALOG,TAPE2,.....
' 7/8/9 EOR
(RANGE CARDS. END WITH 0,0)
" 6/7/8/9 EOF
```

FROM TTY

```
ATTACH,TAPE1,..... (FILE TO BE COPIED AND RE-ARRANGED)
ATTACH,UTILITY.
LIBRARY,UTILITY.
DISCONT,OUTPUT.
REQUEST,TAPE2,*PF.
COPYSEL.
(ENTER RANGES - THERE IS NO PROMPTING - END WITH 0,0)
ROUTE,OUTPUT,DC=PR,.....
CATALOG,TAPE2,.....
```

EXECUTE CARD PARAMETERS

```
COPYSEL,INPUT,INFILE,OUTFILE,REW,OUTPUT.
INPUT - RANGE CARD INPUT FILE
INFILE - FILE TO BE COPIED AND RE-ARRANGED
OUTFILE - OUTPUT (RE-ARRANGED) FILE
REW - INFILE REWIND OPTION
A - REWIND AFTER USE
B - REWIND BEFORE USE
R - REWIND BEFORE AND AFTER USE
U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE (IF ABEND. U IS CHANGED TO R)
OTHER - NO REWIND (DEFAULT)
(ANY WORDS BEGINNING WITH THESE LETTERS WILL PRODUCE THE SAME RESULTS.)
OUTPUT - LISTABLE OUTPUT
```

DEFAULT EXECUTE CARD
COPYSSEL, INPUT, TAPE1, TAPE2, NOREW, OUTPUT.

FL NEEDED TO LOAD: 32000B
FL NEEDED TO RUN : 22000B

DATA CARDS

RANGE SPECIFICATION CARDS ARE FREE-FORM. EACH CARD MUST CONTAIN TWO (2) NUMBERS, EVEN IF THE SECOND IS 0, SEPARATED BY A COMMA (,).
THE FIRST NUMBER IS THE STARTING RECORD NUMBER.
THE SECOND NUMBER IS THE ENDING RECORD NUMBER.
IF R1 GT R2, PROGRAM ABORTS.
IF R1 GT MAXIMUM NUMBER OF RECORDS IN INFILE, PROGRAM ABORTS.
IF R2 GT MAXIMUM NUMBER OF RECORDS IN INFILE, INFILE IS COPIED TO END-OF-FILE.
IF R2 LT 0, INFILE IS COPIED TO END-OF-FILE.
IF R2 IS 0, R1 IS SUBSTITUTED.
IF R1 IS 0, IT SIGNALS THE END OF THE RANGE CARDS.
END RANGE CARDS WITH 0,0.

ERROR MESSAGES

INPUT FILE EMPTY
INPUT FILE IS EMPTY OF NOT REWOUND

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
-----	-----	-----
	DAYFILE	ERROR MESSAGE IF INPUT FILE EMPTY
	INPUT	RANGE CARDS INPUT FILE
	OUTPUT	LISTABLE OUTPUT
	TAPE1	FILE TO BE COPIED AND RE-ARRANGED
	TAPE2	OUTPUT (RE-ARRANGED) FILE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	DATE	EOF	FILESQ	GET
IFETCH	OPENM	PUT	RECOVR	REMARK
REWND	SKIP	TIME		

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
LASTC - FIND LAST NON-BLANK CHARACTER
SETREW - DECODE REWIND OPTION

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 04/27/76

DATE(S) REVISED

05/20/76 - V1.1 - RECORD LENGTH CHANGED TO 150 CHARACTERS
07/28/77 - V1.2 - SHORTEN OUTPUT SUMMARY

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'CV029'

PURPOSE

CONVERT TO 029 PUNCH CODE

FUNCTIONAL CATEGORIES: J1 M2 O1

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

THE INPUT FILE IS REWOUND BEFORE AND AFTER USE, EXCEPT WHEN
THE LFN IS 'INPUT'.

THE OUTPUT CONVERTED FILE IS NOT REWOUND.

THE INPUT FILE IS READ THROUGH END-OF-INFORMATION.

EMBEDDED END-OF-RECORDS AND END-OF-FILES ARE COPIED.

EXECUTION

FROM BATCH AND TTY

ATTACH,ANY,..... (FILE TO BE CONVERTED)
BEGIN.CV029,,ANY,<TID-FOR-ROUTE>.

-OR-

ATTACH,ANY,..... (FILE TO BE CONVERTED)
BEGIN,UTILITY,,CV029,ANY.
ROUTE,ZZZ029,DC=PU,EC=80COL,TID=.... (USER MUST COMPLETE)

EXECUTE CARD PARAMETERS

CV029,INFILE,OUTFILE.OUTPUT.
INFILE - FILE TO BE CONVERTED
(REWOUND, UNLESS 'INPUT')
OUTFILE - CONVERTED FILE (80-COLUMN BINARY)
(NOT REWOUND)
OUTPUT - FPN ERROR MESSAGES

DEFAULT EXECUTE CARD

CV029,INPUT,ZZZ029,OUTPUT.

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 17000B

DAYFILE MESSAGES

INPUT FILE EMPTY
INPUT FILE HAS NO INFORMATION

NNNNN CARDS PUNCHED
(NNNNN DATA, NNN EOR, NN EOF)
OUTPUT SUMMARY

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
1	INPUT ZZZ029 DAYFILE	INPUT FILE CONVERTED FILE NUMBER OF CARDS PROCESSED

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	FILESQ	GET	IFETCH
OPENM	PUT	REMARK	SHIFT	

PART OF PROGRAM

BEOF - WRITE END-OF-FILE (ENTRY IN BEOR)
BEOR - WRITE END-OR-RECORD
BPUNCH - WRITE DATA RECORD
UNPACK - BREAK WORD INTO 10 CHARACTERS

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
IFMTEN - FAST I-FORMAT ENCODE
REQUEST - REQUEST, ZZZ029, *Q.

AUTHORS

? - ORIGINAL AUTHOR OF CV29
SHARON E GOOD - DTNSRDC CODE 1892.1
DAVID V SOMMER - DTNSRDC CODE 1892.2
ED ZIVI - DTNSRDC CODE 2731 (SUBROUTINES)

DATE WRITTEN: UNKNOWN

DATE(S) REVISED

10/10/75
1978 - SEG
10/17/78 - COMPLETE REWRITE. NAME CHANGED TO CV029
(DVS. USING EZ SUBROUTINES AND RECORD MANAGER)

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DECK'

PURPOSE

LIST UPDATE 'SOURCE' FILE DECK/COMDECK NAMES, SEQUENCE
NUMBER AND NUMBER OF CARDS

FUNCTIONAL CATEGORIES: Q7

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

NUMBER OF RECORDS DOES NOT INCLUDE *DECK/*COMDECK CARDS.

EXECUTION

FROM BATCH

ATTACH,UTILITY.
ATTACH,TAPE1,.... (UPDATE 'SOURCE' FILE)
LDSET,LIB=UTILITY.
DECK.

FROM TTY

ATTACH,UTILITY.
ATTACH,TAPE1,.... (UPDATE 'SOURCE' FILE)
LIBRARY,UTILITY.
DECK,.OUT.
ROUTE,OUT.DC=PR,....

EXECUTE CARD PARAMETERS

DECK,INFILE,OUTPUT,REW,LIB,PD,ID.
INFILE - INPUT FILE (UPDATE 'SOURCE' FILE)
OUTPUT - LISTABLE OUTPUT
REW - INFILE REWIND OPTION
A - REWIND AFTER USE
B - REWIND BEFORE USE
R - REWIND BEFORE AND AFTER USE
U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE
OTHER - NO REWIND (DEFAULT)
(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)
LIB - (FIRST PART OF) PFN
(IF OMITTED, HEADING IS: "LFN: INFILE")
PD - SECOND PART OF PFN
D - LIB_DOCUMENTATION
P - LIB_PL
OMITTED - LIB
OTHER - LIB_PD
ID - ID UNDER WHICH LIB_PD IS CATALOGED
(IF OMITTED, NO ID IN HEADING)

DEFAULT EXECUTE CARD

DECK,TAPE1,OUTPUT,NOREW.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 21000B

(PROGRAM ADJUSTS CORE AS REQUIRED)

ERROR MESSAGES

INPUT FILE EMPTY

INPUT FILE HAS NO INFORMATION OR IS NOT REWOUND

INPUT/OUTPUT UNITS

UNIT #

LFN

USE

DAYFILE

TOTALS ARE PUT INTO DAYFILE

OUTPUT

LISTABLE OUTPUT

TAPE1

INPUT UPDATE 'SOURCE' FILE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND

CLOSEM

DATE

FILESQ

GET

IFETCH

MOD

MOVLEV

OPENM

OR

RECOVR

REMARK

SHIFT

TIME

PART OF PROGRAM

EOJ

- ABNORMAL TERMINATION OUTINE

OTHERS

ADJL

- SQUEEZE LEFT (ENGLISH WORDS)

CENTER

- CENTER PHRASE IN LINE

GETLFNS

- GET ACTUAL LOCAL FILE NAMES

IPAKLFT

- SQUEEZE LEFT AND REMOVE BLANKS AND OOB

LASTC

- FIND LAST NON-BLANK CHARACTER IN STRING

SETREW

- DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

L11FMT

L51FMT

L81FMT

L97FMT

L910FMT

FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

R16FMT

R19FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 05/04/73

DATE(S) REVISED

03/07/75

10/07/75 -

CHANGE TO RECORD MANAGER

(SAVES ABOUT 30 PCT CP TIME)

01/23/76 -

V2.0 -

REWRITTEN TO CUT PRINTOUT IN HALF

(SAME FORM OUTPUT AS 'DECKLST')

02/02/76 -

V2.1

05/04/76 -

V2.2 -

ADD OPTIONAL USER HEADING

06/10/76 -

V2.3 -

ADD SEARCH FOR *DECK, AND *COMDECK,

11/13/77 -

V2.4 -

FIX HEADING WHEN ONLY ONE DECK

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DECKLST'

PURPOSE

LIST UPDATE 'SOURCE' FILE DECK/COMDECK NAMES, SEQUENCE
NUMBER, NUMBER OF CARDS, NUMBER OF LINES AND PAGES (IF
COLUMN 1 CARRIAGE CONTROL IS USED).

(LIST CONTENTS OF A DOCUMENTATION FILE)

FUNCTIONAL CATEGORIES: Q7

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

NUMBER OF CARDS DOES NOT INCLUDE *DECK/*COMDECK CARDS.

FROM BATCH

ATTACH,UTILITY.
ATTACH,TAPE1,..... (DOCUMENT FILE)
LDSET,LIB=UTILITY.
DECKLST.

FROM TTY

ATTACH,UTILITY.
ATTACH,TAPE1,..... (DOCUMENT FILE)
LIBRARY,UTILITY.
DECKLST.,OUT.
ROUTE,OUT,DC=PR,.....

EXECUTE CARD PARAMETERS

DECKLST,INFILE,OUTPUT,REW,LIB,PD,ID.
INFILE - INPUT FILE (DOCUMENT FILE)
OUTPUT - LISTABLE OUTPUT
REW - INFILE REWIND OPTION
A - REWIND AFTER USE
B - REWIND BEFORE USE
R - REWIND BEFORE AND AFTER USE
U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE
OTHER - NO REWIND (DEFAULT)
(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)
LIB - (FIRST PART OF) PFN
(IF OMITTED, HEADING IS: "LFN: INFILE")
PD - SECOND PART OF PFN
D - LIB_DOCUMENTATION
P - LIB_PL
OMITTED - LIB_
OTHER - LIB_PD
ID - ID UNDER WHICH LIB_PD IS CATALOGED
(IF OMITTED, NO ID IN HEADING)

DEFAULT EXECUTE CARD

DECKLST,TAPE1,OUTPUT,NOREW.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 21000B

10/13/77

2-52

DECKLST - 1 OF 2

ERROR MESSAGES

INPUT FILE EMPTY

INPUT FILE HAS NO INFORMATION OR IS NOT REWOUND

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
-----	-----	-----
	DAYFILE	TOTALS ARE PUT INTO DAYFILE
	OUTPUT	LISTABLE OUTPUT
	TAPE1	INPUT DOCUMENT FILE

EXECUTION

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	DATE	FILESQ	GET
IFETCH	MOD	MOVLEV	OPENM	OR
RECOVR	REMARK	SHIFT	TIME	

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

ADJL - SQUEEZE LEFT (ENGLISH WORDS)
CENTER - CENTER PHRASE IN LINE
GETLFNS - GET ACTUAL LOCAL FILE NAMES
IPAKLFT - SQUEEZE LEFT AND REMOVE BLANKS AND OOB
LASTC - FIND LAST NON-BLANK CHARACTER IN STRING
SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)

L11FMT L51FMT L81FMT L97FMT L910FMT

FAST R-FORMAT DECODE (RIGHT-ADJ. ZERO-FILLED)

R16FMT R19FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 02/20/74

DATE(S) REVISED

11/11/75 - V2.0 - CONVERTED TO RECORD MANAGER CALLS
01/23/76 - V2.1
02/02/76 - V2.2
05/05/76 - V2.3 - ADD OPTIONAL USER HEADING
06/10/76 - V2.4 - ADD SEARCH FOR *DECK, AND *COMDECK,
11/13/77 - V2.5 - FIX HEADING WHEN ONLY ONE DECK

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DEKSORT'

PURPOSE

SORT IDENT AND DECK LISTINGS FROM UPDATE OUTPUT FILE

FUNCTIONAL CATEGORIES: Q7 M1

REMARKS

NONE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND EOF MOD MOVLEV SHIFT
SYSTEM

PART OF PROGRAM

FILL - EXTRACT IDENT AND DECK NAMES
HANDLE - FIND IDENT AND DECK NAMES
SORTPRT - CALL SORT AND PRINT SORTED DATA

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
PAKLFT - SQUEEZE LEFT AND REMOVE BLANKS
REDUCE - ADJUST FIELD LENGTH
SSORTL - FTN LOGICAL SHELL SORT
ZBLANK - CHANGE BLANKS TO 00B AND VICE VERSA

ARITHMETIC STATEMENT FUNCTIONS

L11FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
NROWS - COMPUTE NUMBER OF ROWS IN PRINTOUT

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

UNIT	#	LFN	USE
1		TAPE1	INPUT FILE (UPDATE OUTPUT LISTING FROM O PARAMETER)
		INPUT	OPTIONAL INPUT FILE FOR 40-CHAR TITLE
		OUTPUT	LISTABLE OUTPUT

EXECUTION

FROM BATCH

ATTACH,OLDPL,.... (UPDATE LIBRARY TO BE LISTED)
UPDATE,P,C=0,O=ANY.
BEGIN,UTILITY,,DEKSORT,ANY,....

FROM TTY

ATTACH,OLDPL,.... (UPDATE LIBRARY TO BE LISTED)
UPDATE,P,C=0,O=ANY.
BEGIN,UTILITY,,DEKSORT,ANY,OUT,....
ROUTE,OUT,DC=PR,....

EXECUTE CARD PARAMETERS

DEKSORT,INFILE,OUTPUT,OLD,PL,ID,INPUT.

- INFILE - INPUT FILE (UPDATE LISTING)
- OUTPUT - LISTABLE OUTPUT
- OLD - IF 0, READ 40-CHARACTER TITLE FROM 'INPUT'
IF ANYTHING ELSE, OLD AND PL ARE PFN OF
UPDATE LIBRARY BEING LISTED (OLD AND PL ARE
EACH 0-7 CHARACTERS)
(DEFAULT: OLD)
- PL - SECOND HALF OF PFN (IF OLD NE 0)
(DEFAULT: PL)
- ID - ID UPDATE LIBRARY IS CATALOGED UNDER
(IF OLD NE 0)
(IF OMITTED, ID IS NOT PUT INTO HEADING)
- INPUT - IF OLD=0, THIS FILE CONTAINS UP TO 1
CARD CONTAINING A 40-CHARACTER TITLE.

NOTE: IF LFN IS 0, THE HEADING WILL CONTAIN THE 40
CHARACTERS READ FROM 'INPUT'.

IF OLD, PL, ID OMITTED, HEADING WILL CONTAIN
'OLDPL'.

IF OLD, PL OMITTED AND ID IS CXXX, HEADING WILL
CONTAIN 'OLDPL,ID=CXXX'.
ETC.

DEFAULT EXECUTE CARD

DEKSORT,TAPE1,OUTPUT.

FL NEEDED TO LOAD: 26000B

FL NEEDED TO RUN : 16000B + TABLE SPACE (ABOUT 1 WORD PER
IDENT AND DECK NAME)

(PROGRAM ADJUSTS CORE AS REQUIRED)

AUTHOR

S. DERRY - NSWC, DAHLGREN, VA.

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 08/12/75 - SD

DATE(S) REVISED

06/08/76 - DVS - INPUT MODIFIED TO ALLOW INFO IN EXEC CARD.
EXPAND HEADING, STREAMLINE PRINTOUT,
PUT LARGE ARRAY IN BLANK COMMON (TO REDUCE
ABSOLUTE DECK SIZE AND LOADING FL) AND GET
CORE FOR NAME TABLE DYNAMICALLY TO REDUCE
CORE REQUIREMENT AND ELIMINATE TABLE
OVERFLOW.

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DFDATIM'

PURPOSE

PUT DATE/TIME INTO DAYFILE

FUNCTIONAL CATEGORIES: Q0

LANGUAGE: CDC 6000 CP COMPASS

REMARKS

NONE

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LDSET,LIB=UTILITY.

DFDATIM.

OR

LIBRARY,UTILITY.

FROM TTY

BEGIN,UTILITY,,DFDATIM.

EXECUTE CARD PARAMETERS

DFDATIM.

DEFAULT EXECUTE CARD

DFDATIM.

FL NEEDED TO LOAD: 11000B

FL NEEDED TO RUN : 100B

OUTPUT UNITS

LFN

USE

DAYFILE DATE AND TIME MESSAGE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

NONE

OTHERS

NONE

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 06/20/74 (V2.0)

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DMPFIL'

PURPOSE

DUMP FIRST N WORDS OF EACH LOGICAL RECORD IN M FILES

FUNCTIONAL CATEGORIES: N2

AUTHOR

DAVID V SOMMER - NSRDC CODE 1892.2

DATE WRITTEN: 12/01/74

DATE(S) REVISED

REMARKS

OUTPUT IS SUITABLE FOR TTY. EACH WORD IS LISTED ON ONE LINE
IN BOTH OCTAL AND CHARACTER AND IS PRECEDED BY THE
LOGICAL RECORD NUMBER (DECIMAL AND OCTAL). PARITY
ERRORS, IF ANY, WILL BE FLAGGED.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

BUFFER IN

LENGTH

MINO

RECOVR

REMARK

UNIT

OTHERS

EOJ - ABNORMAL TERMINATION ROUTINE

GETLFNS - GET ACTUAL LOCAL FILE NAMES

IFMTV - FAST VARIABLE I-FORMAT DECODE

INPUT/OUTPUT UNITS

FORTRAN LOCAL

LOGICAL FILE

U N I T NAME

USE

1

TAPE1

FILE TO BE DUMPED

OUTPUT

LISTABLE OUTPUT

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LIBRARY,UTILITY.

ATTACH,TAPE1. . . . (FILE TO BE DUMPED)

DMPFIL.

FROM TTY

ATTACH,UTILITY.

LIBRARY,UTILITY.

ATTACH,TAPE1. . . . (FILE TO BE DUMPED)

CONNECT,OUTPUT.

DMPFIL.

EXECUTE CARD PARAMETERS

DMPFIL,INFILE,OUTPUT,NWORDS,MFILES,REW.

INFILE - INPUT FILE TO BE DUMPED
OUTPUT - LISTABLE OUTPUT
NWORDS - NUMBER OF WORDS OF EACH LOGICAL RECORD TO BE
 DUMPED (DEFAULT: 1 WORD)
MFILES - NUMBER OF FILES OF A MULTI-FILE FILE TO BE
 PROCESSED (PROGRAM WILL STOP IF DOUBLE EOF
 IS READ FIRST) (DEFAULT: 1 FILE)
REW - REWIND OPTION
 A - REWIND INFILE AFTER USE
 B - REWIND INFILE BEFORE USE
 R - REWIND INFILE BEFORE AND AFTER USE
 OTHER - NO REWIND (DEFAULT)
 (ANY WORDS BEGINNING WITH 'A', 'B', 'R'
 WILL PRODUCE THE SAME RESULTS)

DEFAULT EXECUTE CARD

DMPFIL,TAPE1,OUTPUT,1,1,NOREW.

FL NEEDED TO LOAD: 25000B

PROGRAM 'DOC'

V2.4

PURPOSE

PREPARE (SUB)PROGRAM AND CATALOGUED PROCEDURE DOCUMENTATION

FUNCTIONAL CATEGORIES: Q6

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

IF ANY QUESTION IS ANSWERED WITH A SINGLE ENTRY OF ? , A LONG(ER), MORE DETAILED DESCRIPTION OF THE CURRENT ITEM IS TYPED.

IF ANY QUESTION (EXCEPT FIRST FOUR (4)) IS ANSWERED WITH A SINGLE ENTRY OF @ , THE CURRENT DOCUMENT IS TERMINATED.

THE GENERATED DOCUMENT HAS CARRIAGE CONTROL IN COLUMN 1: SECTION HEADINGS BEGIN IN COLUMN 10; SUB-HEADINGS BEGIN IN COLUMN 13; USER-SUPPLIED INFORMATION USUALLY BEGINS IN COLUMNS 13 OR 16.

EXECUTION

FROM BATCH

NOT DESIGNED FOR BATCH USE

FROM TTY

CONNECT,OUTPUT

ATTACH,UTILITY.

LIBRARY,UTILITY.

DOC.

(CREATE DOCUMENT IN FILE 'DOCMNT')

EDITOR

EDIT,DOCMNT,S

(MODIFY, IF NECESSARY. INDICATE START OF EACH PAGE BY PUTTING A '1' IN COLUMN 1 OF EACH LINE WHICH IS TO BE THE FIRST LINE OF A PAGE.)

SAVE,NEWDOC,N

LINER,NEWDOC.

(WILL COUNT PAGES AND LINER PER PAGE. IF ANY PAGE HAS MORE THAN 59 LINES, GO BACK AND RESTRUCTURE THE DOCUMENT.)

BYE

DOCIT,NEWDOC,FILE.

(DO SOMETHING WITH 'FILE' -- PERHAPS USE PROCEDURES 'DOCADD' OR 'DOCREPL' TO PUT IT INTO A DOCUMENT FILE)

EXECUTE CARD PARAMETERS

DOC,DOCMNT,OPT.

DOCMNT - CREATED DOCUMENT(S)
(MAY BE CATALOGED)

OPT - OPTION

LONG - TYPE LONG DESCRIPTION AT START OF EXECUTION (DEFAULT)

Q - DO NOT TYPE LONG DESCRIPTION

NEW - TYPE DESCRIPTION OF NEW FEATURES

OTHER - QUICK ENTRY OF ANSWERS TO FIRST 4 QUESTIONS

DEFAULT EXECUTE CARD
DOC,DOCMNT, LONG.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 46000B
FL NEEDED TO RUN : 36000B

DATA ENTRIES

THE DATA REQUESTED IS SUMMARIZED BELOW AND ON PAGE 3.
EACH ITEM IS DISCUSSED IN GREATER DETAIL STARTING ON PAGE 4.

ITEMS IN THE DOCUMENT ARE ENTERED IN RESPONSE TO QUESTIONS.
THE RESPONSES ARE ONE LINE OR A VARIABLE NUMBER OF LINES.

VARIABLE LENGTH SECTIONS HAVE (:) IN THE PROMPTING MESSAGE.
EACH CONSISTS OF 0 OR MORE LINES AND IS TERMINATED BY A
SEPARATE ENTRY OF : OR =. TO ERASE THE PREVIOUS LINE,
USE A SEPARATE ENTRY OF MINUS (-).

ALL (Y/N) RESPONSES: Y (OR ANY WORD STARTING WITH Y)=YES;
ANYTHING ELSE=NO. IN THE DISCUSSIONS BELOW, 'ENTER Y' MEANS
ENTER ANY WORD BEGINNING WITH Y; 'ENTER N' MEANS ENTER ANY
WORD NOT BEGINNING WITH Y.

A SEPARATE ENTRY OF @ WILL IMMEDIATELY TERMINATE THE
CURRENT DOCUMENT.

A SEPARATE ENTRY OF ? WILL PROVIDE A LONGER FORM OF THE
CURRENT PROMPTING MESSAGE.

A SEPARATE ENTRY OF -L WILL SWITCH TO LONG PROMPTING UNTIL
END OF PROGRAM OR -S.

A SEPARATE ENTRY OF -S WILL SWITCH TO SHORT PROMPTING
UNTIL END OF PROGRAM OR -L.

A SEPARATE ENTRY OF -ON WILL TURN REPRINT ON (PRINT WHAT
YOU JUST ENTERED) UNTIL END OF PROGRAM OR -OFF.

A SEPARATE ENTRY OF -OFF WILL TURN REPRINT OFF UNTIL END
OF PROGRAM OR -ON.

MOST MESSAGES WILL HAVE (IN PARENTHESES) THE NUMBER OF
CHARACTERS ACCEPTED PER LINE.

THE FOLLOWING ARE ASKED AT MOST ONCE PER EXECUTION:

*DECK

UNDERLINE

REPRINT - MAY BE CHANGED DYNAMICALLY

PROMPT - MAY BE CHANGED DYNAMICALLY

THESE 4 MAY BE ENTERED AS A SINGLE PARAMETER ON THE EXECUTE
CARD (DEFAULT- N2NS).

THE FOLLOWING IS ASKED ONCE PER DOCUMENT:
MAIN/SUBROUTINE/FUNCTION/PROCEDURE/END

THE REST DEPEND UPON THE RESPONSE TO M/MC/S/F/P/E AND ARE
SUMMARIZED IN THE TABLE ON PAGE 3:

		MAIN PROGRAM					SUBROUTINE/FUNCTION					PROCED				
		FORTRAN	COBOL	OTHER	COVER		FORTRAN	COBOL	OTHER			FORTRAN	COBOL	OTHER		
NAME	I	X	.	X	.	X	I	X	I	X	.	X	.	X	I	X
PURPOSE	I	X	.	X	.	X	I	X	I	X	.	X	.	X	I	X
FUNC CATEGORIES	I	X	.	X	.	X	I	X	I	X	.	X	.	X	I	X
LANGUAGE	I	X	.	X	.	X	I		I	X	.	X	.	X	I	
PROCED LOCATION	I		.		.		I		I		.		.		I	X
REMARKS	I	X	.	X	.	X	I		I	X	.	X	.	X	I	
USAGE	I		.		.		I		I	X	.	X	.	X	I	
BEGIN STATEMENT	I		.		.		I		I		.		.		I	X
# ARGS	I		.		.		I		I	X	.	X	.	X	I	X
DESCRIPTION	I		.		.		I		I	X	.	X	.	X	I	X
DEFAULT BEGIN	I		.		.		I		I		.		.		I	X
MAX FL	I		.		.		I		I		.		.		I	X
REMARKS	I		.		.		I		I		.		.		I	X
CM REQUIRED	I		.		.		I		I	X	.	X	.	X	I	
BATCH CTL CDS	I	X	.	X	.	X	I		I		.		.		I	
TTY CTL CRDS	I	X	.	X	.	X	I		I		.		.		I	
EXECUTE CARD	I	X	.	X	.	X	I	X	I		.		.		I	
DEFAULT EXEC CD	I	X	.	X	.	X	I	X	I		.		.		I	
DEFAULT PL	I	X	.		.		I		I		.		.		I	
LOAD FL	I	X	.	X	.	X	I		I		.		.		I	
RUN FL	I	X	.	X	.	X	I		I		.		.		I	
REDUCTION	I	X	.	X	.	X	I		I		.		.		I	
# DATA CARDS	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
SUB-HEADING	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
DESCRIPTION	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
MORE SUB-HEAD	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
ERRORS	I	X	.	X	.	X	I		I		.		.		I	X
I/O UNITS	I	X	.	X	.	X	I		I	X	.	X	.	X	I	
DESCRIPTION	I	X	.	X	.	X	I		I	X	.	X	.	X	I	
# EXAMPLES	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
EXAMPLE(S)	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
METHOD	I	X	.	X	.	X	I		I	X	.	X	.	X	I	
SUBPROGRAMS	I		.		.		I		I		.		.		I	
PART OF LANG	I	X	.	X	.	X	I		I	X	.	X	.	X	I	
PART OF PROG	I	X	.		.	X	I		I	X	.		.	X	I	
OTHERS	I	X	.	X	.	X	I		I	X	.	X	.	X	I	
ARITH STMT FCNS	I	X	.		.		I		I	X	.		.		I	
# AUTHORS	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
AUTHOR(S)	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
DATE WRITTEN	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
DATES REVISED	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X
SOURCE LOCATION	I	X	.	X	.	X	I		I	X	.	X	.	X	I	
OBJECT LOCATION	I	X	.	X	.	X	I		I	X	.	X	.	X	I	
ANY MORE?	I	X	.	X	.	X	I		I	X	.	X	.	X	I	X

THE FOLLOWING FOUR ITEMS ARE REQUESTED AT MOST ONCE PER EXECUTION:

- *DECK** A RESPONSE OF 'Y' WILL CAUSE AN UPDATE *DECK CARD TO BE GENERATED BEFORE EACH DOCUMENT CREATED DURING THIS EXECUTION.
- ANY OTHER RESPONSE WILL NOT GENERATE *DECK CARDS.
- IF THE DOCUMENTS GENERATED ARE TO BE PROCESSED BY CATALOGUED PROCEDURES 'DOCADD' OR 'DOCREPL', RESPOND 'N'.
- UNDERLINE** SOME SECTIONS WILL HAVE SUB-HEADINGS WHICH WILL BE UNDERLINED. THERE ARE TWO POSSIBLE UNDERLINE CHARACTERS.
- ENTER 1 FOR UNDERSCORE (_), WHICH WILL BE PRINTED ON THE SAME LINE AS THE SUB-HEADING (CARRIAGE CONTROL: +). (SEE PAGE 11 FOR A SAMPLE.)
- ENTER 2 FOR HYPHEN (-), WHICH WILL BE PRINTED ON THE LINE AFTER THE SUB-HEADING (CARRIAGE CONTROL: SPACE). (SEE PAGE 8 FOR A SAMPLE.)
- REPRINT** A RESPONSE OF 'Y' WILL CAUSE EACH OF THE ENTRIES TO BE TYPED BACK. THERE IS LIMITED PROVISION FOR CORRECTION IN MULTIPLE LINE ENTRIES.
- ANY OTHER RESPONSE WILL CAUSE NO REPRINT.
- TO TURN REPRINT ON AT ANY TIME DURING DOCUMENT GENERATION, USE A SEPARATE ENTRY OF '-ON'; TO TURN REPRINT OFF, ENTER '-OFF'.
- PROMPT** THERE ARE TWO VERSIONS OF EACH PROMPTING MESSAGE.
- ENTER L TO RECEIVE THE LONG FORM.
- ENTER S TO RECEIVE THE SHORT FORM.
- TO SWITCH TO LONG FORM AT ANY TIME DURING DOCUMENT GENERATION, USE A SEPARATE ENTRY OF '-L'; TO SWITCH TO SHORT FORM, ENTER '-S'.

THESE QUESTIONS MAY BE ANSWERED ON THE EXECUTE CARD TO SAVE TIME.

THE FOLLOWING ITEM IS REQUESTED ONCE PER DOCUMENT:

MAIN/COVER/SUBROUTINE/FUNCTION/PROCEDURE/END

THE RESPONSE TO THIS DETERMINES WHICH OF THE REMAINING QUESTIONS WILL BE ASKED.

- ENTER M TO DOCUMENT A MAIN PROGRAM.
- ENTER MC TO CREATE A MAIN PROGRAM COVER SHEET.
- ENTER S TO DOCUMENT A SUBROUTINE.
- ENTER F TO DOCUMENT A FUNCTION.
- ENTER SF TO DOCUMENT A SUBPROGRAM WHICH MAY BE USED AS A SUBROUTINE OR FUNCTION. TWO HEADINGS WILL BE GENERATED.
- ENTER FS FOR THE SAME AS SF BUT WITH THE FUNCTION HEADING FIRST.
- ENTER P TO DOCUMENT A CATALOGUED PROCEDURE.
- ENTER E TO END THE PROGRAM.

THE REMAINING QUESTIONS DEPEND UPON THE RESPONSE TO THE LAST QUESTION. THE FOLLOWING ABBREVIATIONS WILL BE USED:

M - MAIN PROGRAM, ANY LANGUAGE
MC - MAIN PROGRAM COVER SHEET
M(F) - MAIN PROGRAM, FORTRAN
M(C) - MAIN PROGRAM, COBOL
M(O) - MAIN PROGRAM, NOT FORTRAN OR COBOL
SF - SUBROUTINE OR FUNCTION, ANY LANGUAGE
SF(F) - SUBROUTINE OR FUNCTION, FORTRAN
SF(C) - SUBROUTINE OR FUNCTION, COBOL
SF(O) - SUBROUTINE OR FUNCTION, NOT FORTRAN OR COBOL
P - CATALOGUED PROCEDURE

NAME 1-7 CHARACTER PROGRAM OR SUBPROGRAM NAME -OR-
1-10 CHARACTER PROCEDURE NAME. (M,MC,SF,P)
NOTE: WHILE PROCEDURE NAMES MAY BE 10 CHARACTERS, UPDATE
IS LIMITED TO 9-CHARACTER DECK NAMES AND PROCEDURES
FOR MAINTAINING DOCUMENT FILES ARE LIMITED TO
7-CHARACTER DECK NAMES.

PURPOSE ANY NUMBER OF 1- TO 60-CHARACTER LINES DESCRIBING THE
PURPOSE OF THE ROUTINE. END WITH A SEPARATE ENTRY OF :
OR =. (M,MC,SF,P)

FUNCTIONAL CATEGORIES
SPECIFY 1-10 2-CHARACTER FUNCTIONAL CATEGORIES TO WHICH
THIS ROUTINE BELONGS. A LIST OF CATEGORIES MAY BE
OBTAINED BY EXECUTING THE FOLLOWING COMMAND:
BEGIN,UTILITY,,PROGDOC,OTHER,,FUNCAT.
THE LIST IS 3 PAGES LONG.
(3-CHARACTER CATEGORIES WILL BE SUPPORTED IN V2.5)
(M,MC,SF,P)

LANGUAGE 1-50 CHARACTERS NAMING OR DESCRIBING THE LANGUAGE THE
ROUTINE IS WRITTEN IN. (M,SF)
THE FOLLOWING ABBREVIATIONS ARE RECOGNIZED:

A - ALGOL
B - BASIC
C - COBOL (ALSO COB)
C4 - COBOL 4
C5 - COBOL 5
COM - CDC 6000 CP COMPASS
F - FORTRAN
F4 - FORTRAN IV
FTN - FORTRAN IV EXTENDED
F5 - FORTRAN 77
FTN5 - FORTRAN 77 EXTENDED
MNF - MINNESOTA FORTRAN
P - PL/I (ALSO PLI, PL1, PL/1)
RATFOR - RATIONAL FORTRAN (ALSO RF)
S - SNOBOL

PROCEDURE LOCATION
SPECIFY THE LOCATION OF THE CATALOGUED PROCEDURE BEING
DOCUMENTED (PROGRAM AND SUBPROGRAM LOCATIONS ARE REQUESTED
LATER). GIVE EITHER THE PERMANENT FILE NAME AND ID OR A
SAMPLE ATTACH. USE ANY NUMBER OF 1- TO 60-CHARACTER
LINES.

REMARKS ENTER ANY REMARKS ABOUT THE (SUB)PROGRAM. USE ANY NUMBER OF 1- TO 60-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =. (M,SF)
(REMARKS FOR MAIN PROGRAM COVER SHEET ARE GENERATED AUTOMATICALLY)
(REMARKS FOR PROCEDURES ARE REQUESTED LATER.)

USAGE ENTER CALL STATEMENT(S) OR FUNCTION USAGE WITH ALL ARGUMENTS SHOWN. GIVE ALL POSSIBLE WAYS THE SUBPROGRAM CAN BE USED. USE ANY NUMBER OF 1- TO 60-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =. DO NOT DESCRIBE THE ARGUMENTS HERE. THE NEXT PROMPTING WILL BE FOR ARGUMENT DESCRIPTION. (SF)

BEGIN STATEMENT ENTER THE BEGIN STATEMENT SHOWING ALL PARAMETERS. TRY TO USE THE NAMES IN THE PROCEDURE HEADER. IF POSSIBLE. USE ANY NUMBER OF 1- TO 60-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =. DO NOT DESCRIBE THE PARAMETERS HERE. THE NEXT PROMPTING WILL BE FOR PARAMETER DESCRIPTION. (P)

NUMBER OF ARGUMENTS/PARAMETERS
ENTER 0 IF THE ROUTINE HAS NO PARAMETERS.
ENTER 1 IF THE ROUTINE HAS 1 PARAMETERS.
ENTER 2 IF THE ROUTINE HAS 2 OR MORE PARAMETERS.
(SF,P)

DESCRIPTION OF ARGUMENTS/PARAMETERS
REQUESTED ONLY IF RESPONSE TO LAST QUESTION WAS 1 OR 2.
DESCRIBE THE ARGUMENT(S) OF THE CALL OR FUNCTION USAGE OR BEGIN STATEMENT PARAMETERS. USE ANY NUMBER OF 1- TO 60-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =.
(SF,P)

DEFAULT BEGIN ENTER THE BEGIN STATEMENT SHOWING ALL DEFAULT VALUES. USE ANY NUMBER OF 1- TO 60-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =. (P)

MAX FL FIELD LENGTH REQUIRED FOR THE LARGEST PROGRAM EXECUTED IN THE PROCEDURE. (P)
(FL FOR PROGRAMS AND SUBPROGRAMS IS REQUESTED LATER.)

REMARKS ENTER ANY REMARKS ABOUT THE PROCEDURE. USE ANY NUMBER OF 1- TO 60-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =. (P)
(REMARKS FOR (SUB)PROGRAMS ARE REQUESTED EARLIER.)

CM REQUIRED ENTER THE CORE REQUIRED FOR THIS SUBPROGRAM (1-40 CHARACTERS). THIS MAY BE OBTAINED FROM THE COMPILATION LISTING. (SF)

BATCH CONTROL CARDS

LIST THE CONTROL CARDS AND SHOW THE POSITIONING OF ANY DATA CARDS. DON'T SHOW JOB OR CHARGE CARDS UNLESS THE JOB CARD HAS SOME SPECIAL REQUIRED PARAMETERS (MT, NT, PK, T, BUT NOT CM). USE ANY NUMBER OF 1- TO 57-CHARACTER LINES.

IF THE PROGRAM IS NOT DESIGNED FOR BATCH USE, THIS MESSAGE (SEE PAGE 2) CAN BE GENERATED AUTOMATICALLY WITH A SINGLE ENTRY OF 0 (ZERO).

IN EITHER CASE, END WITH A SEPARATE ENTRY OF : OR =. (M)

TTY CONTROL CARDS

LIST THE CONTROL CARDS AND SHOW THE POSITIONING OF ANY TTY DATA ENTRIES (SEE PAGE 2). USE ANY NUMBER OF 1- TO 57-CHARACTER LINES.

IF THE PROGRAM IS NOT DESIGNED FOR TTY USE, THIS MESSAGE CAN BE GENERATED AUTOMATICALLY WITH A SINGLE ENTRY OF 0 (ZERO).

IN EITHER CASE, END WITH A SEPARATE ENTRY OF : OR =. (M)

EXECUTE CARD GIVE THE EXECUTE CARD SHOWING ANY PARAMETERS. THEN LIST AND DESCRIBE EACH PARAMETER (SUGGEST STARTING THE DESCRIPTIONS WITH 3 SPACES (SEE PAGE 2)). USE ANY NUMBER OF 1- TO 57-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =. (M,MC)

DEFAULT EXECUTE CARD

GIVE THE EXECUTE CARD SHOWING ALL DEFAULT VALUES. USE ANY NUMBER OF 1- TO 57-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =. (M,MC)

DEFAULT PL ENTER PRINT LIMIT (PL) AS SPECIFIED ON FTM CONTROL CARD. IF NOT SPECIFIED, ENTER SPACE. 0. : OR =. (MIF)

LOAD FL ENTER THE FIELD LENGTH NEEDED TO LOAD THE PROGRAM (1-40 CHARACTERS). (M)

RUN FL ENTER THE FIELD LENGTH NEEDED TO RUN THE PROGRAM (1-40 CHARACTERS). (M)

REDUCTION ENTER SPACE, : OR = IF THE PROGRAM DOES NOT SPECIFICALLY ADJUST CORE BUT USES THE CORE DETERMINED BY THE LOADER.
ENTER 0 IF THE PROGRAM SPECIFICALLY REDUCES TO THE MINIMUM NEEDED TO RUN.
ENTER 1 IF THE PROGRAM SPECIFICALLY ADJUSTS CORE UP AND/OR DOWN AS PROGRAM REQUIREMENTS CHANGE.
IF THE PROGRAM REQUESTS A SPECIFIC AMOUNT OF CORE, ENTER THAT AMOUNT. (M)

NUMBER OF DATA CARDS

ENTER 0 IF NO DATA CARDS.
ENTER 1 FOR THE HEADING 'DATA CARD'.
ENTER 2 FOR THE HEADING 'DATA CARDS'.
(M,SF,P)

DATA CARD SUB-HEADING

ENTER 0 IF NO SUB-HEADING IS DESIRED.
ENTER 1 FOR THE SUB-HEADING 'COL CONTENTS'.
ENTER 2 FOR THE SUB-HEADING 'CARD COL CONTENTS'.
(M,SF,P)

DATA CARD DESCRIPTION

DESCRIBE THE DATA CARDS. USE ANY NUMBER OF 1- TO 60-
CHARACTER LINES (IF NO SUB-HEADING) OR 1- TO 57-CHARACTER
LINES (IF SUB-HEADING). END WITH A SEPARATE ENTRY OF : OR
=. (M,SF,P)

DO YOU WANT ANOTHER SUB-HEADING?

ASKED ONLY IF SUB-HEADINGS WERE SPECIFIED.
ENTER Y FOR ANOTHER SUB-HEADING.
ENTER N TO CONTINUE THE DOCUMENT.

ERROR MESSAGES

LIST ERROR MESSAGES THE PROGRAM CAN PRODUCE WITH AN
EXPLANATION OF EACH (SUGGEST STARTING EXPLANATION WITH 3
SPACES (SEE PAGE 10)). USE ANY NUMBER OF 1- TO
60-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =.
IF NO ENTRIES ARE GIVEN, THE SECTION WILL NOT APPEAR IN
THE GENERATED DOCUMENT. (M,P)

INPUT/OUTPUT UNITS

ENTER SPACE. : OR = IF NO I/O UNITS.
ENTER I FOR THE HEADING 'INPUT UNITS'.
ENTER O FOR THE HEADING 'OUTPUT UNITS'.
ENTER IO FOR THE HEADING 'INPUT/OUTPUT UNITS'.
ENTER I/O FOR 2 HEADINGS: 'INPUT UNITS' AND 'OUTPUT UNITS'
(EACH WILL BE PROMPTED FOR
(M,SF) SEPARATELY.)

DESCRIPTION OF I/O UNITS

REQUESTED ONLY IF THE RESPONSE TO THE LAST QUESTION WAS I,
O, IO OR I/O. SUB-HEADINGS ARE TYPED TO AID IN FORMATTING
DESCRIPTIONS.

FOR FORTRAN, 3 COLUMNS ARE USED: FORTRAN LOGICAL UNIT
NUMBER, LOCAL FILE NAME AND USE. FOR EXAMPLE, FOR THE
PROGRAM STATEMENT:

PROGRAM ANY (INPUT, TAPE7, OUTPUT, TAPE5=INPUT)
UNIT # LFN USE

5	INPUT	DATA CARD INPUT
	OUTPUT	LISTABLE OUTPUT
7	TAPE7	WORK FILE

LIST FILES IN ALPHABETICAL ORDER BY LFN. BE SURE TO
INCLUDE ALL RECORD MANAGER FILES WHICH ARE NOT ALSO IN THE
PROGRAM STATEMENT.

FOR NON-FORTRAN, ONLY THE LAST 2 COLUMNS ARE USED.
(M,SF)

NUMBER OF EXAMPLES

ENTER 0 IF NO EXAMPLES.
ENTER 1 IF 1 EXAMPLE (HEADING WILL BE 'EXAMPLE').
ENTER 2 IF 2 OR MORE EXAMPLES (HEADING WILL BE
'EXAMPLES').
(M,SF,P)

EXAMPLES GIVE THE EXAMPLE(S). USE ANY NUMBER OF 1- TO 60-CHARACTER
LINES. END WITH A SEPARATE ENTRY OF : OR =. (M,SF,P)

METHOD IF DESIRED, DESCRIBE THE METHOD USED. IF APPROPRIATE,
CITE REFERENCES. USE ANY NUMBER OF 1- TO 60-CHARACTER
LINES. END WITH A SEPARATE ENTRY OF : OR =. IF NO
DESCRIPTION IS GIVEN, THE SECTION WILL NOT APPEAR IN THE
GENERATED DOCUMENT. (M,SF)

SUBPROGRAMS REQUIRED (PART OF LANGUAGE)

LIST ALL SUBROUTINES AND FUNCTIONS USED BY THIS ROUTINE
WHICH ARE A PART OF THE LANGUAGE (SUCH AS SIN, COS, EOF,
BUFFEROUT, CONNEX, ETC.). USE ANY NUMBER OF 1- TO 57-
CHARACTER LINES. FIVE NAMES WILL FIT ON A LINE IN 60-
CHARACTER FIELDS. THEY SHOULD BE LISTED ALPHABETICALLY OR
GROUPED ACCORDING TO TYPE (EG. LOGICAL FUNCTIONS, TRIG
FUNCTIONS, NON-STANDARD I/O ROUTINES, ETC.). END WITH A
SEPARATE ENTRY OF : OR =. (M,SF)

SUBPROGRAMS REQUIRED (PART OF PROGRAM)

LIST AND DESCRIBE ALL SUBROUTINES AND FUNCTIONS WHICH WERE
WRITTEN SPECIFICALLY FOR THIS PROGRAM OR SUBPROGRAM. USE
ANY NUMBER OF 1- TO 57-CHARACTER LINES. END WITH A
SEPARATE ENTRY OF : OR =. (M(F),M(O),SF(F),SF(O))

SUBPROGRAMS REQUIRED (OTHERS)

LIST ALL SUBPROGRAMS USED (SUCH AS THOSE IN USER LIBRARIES
OR OTHER FILES) WHICH ARE NOT LISTED ABOVE. USE ANY
NUMBER OF 1- TO 57-CHARACTER LINES. END WITH A SEPARATE
ENTRY OF : OR =. (M,SF)

ARITHMETIC STATEMENT FUNCTIONS

LIST AND DESCRIBE ALL ARITHMETIC STATEMENT FUNCTIONS USED.
USE ANY NUMBER OF 1- TO 60-CHARACTER LINES. END WITH A
SEPARATE ENTRY OF : OR =. (M(F),SF(F))

NUMBER OF AUTHORS

ENTER 1 IF 1 AUTHOR (HEADING WILL BE 'AUTHOR').
ENTER 2 IF 2 OR MORE AUTHORS (HEADING WILL BE 'AUTHORS')
(M,SF,P)

AUTHORS

LIST ALL AUTHORS WITH COMPANY AND/OR CODE. USE ANY NUMBER
OF 1- TO 60-CHARACTER LINES. END WITH A SEPARATE ENTRY OF
: OR =. (M,SF,P)

DATE WRITTEN ENTER THE DATE WRITTEN (1-50 CHARACTERS). (M,SF,P)

DATES REVISED

ENTER THE DATES REVISED, WITH PERHAPS A DESCRIPTION OF THE REVISION, PROGRAM REVISION NUMBER, ETC. USE ANY NUMBER OF 1- TO 60-CHARACTER LINES. END WITH A SEPARATE ENTRY OF :
OR =. (M,SF,P)

SOURCE DECK LOCATION

LIST ALL PLACES THE SOURCE PROGRAM IS LOCATED. USE ANY NUMBER OF 1- TO 57-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =. (M,SF)

OBJECT DECK LOCATION

LIST ALL PLACES THE OBJECT PROGRAM IS LOCATED. USE ANY NUMBER OF 1- TO 57-CHARACTER LINES. END WITH A SEPARATE ENTRY OF : OR =. (M,SF)

DO YOU WANT TO DOCUMENT ANOTHER ROUTINE?

ENTER Y TO DOCUMENT ANOTHER ROUTINE.

ENTER N TO END THE PROGRAM.

IT IS SUGGESTED THAT ONLY ONE DOCUMENT BE GENERATED AT A TIME.

(M,SF,P)

ERROR MESSAGES

DOCUMENT TERMINATED - DOCNAME

TTY MESSAGE WHEN USER ENTERS @ TO TERMINATE THE CURRENT DOCUMENT

IGNORED - NO PREVIOUS LINE TO DELETE

USER ENTERED '-' IN MULTIPLE LINE SECTION THAT IS CURRENTLY EMPTY (REPRINT MODE ONLY)

LAST LINE DELETED

USER ENTERED '-' IN MULTIPLE LINE SECTION (REPRINT MODE ONLY)

SORRY. I MUST HAVE A PROCEDURE NAME BEFORE I CAN CONTINUE. SELF-EXPLANATORY

SORRY. I MUST HAVE A ROUTINE NAME BEFORE I CAN CONTINUE. SELF-EXPLANATORY.

***** THIS DOCUMENT TERMINATED EARLY *****

PUT INTO DOCUMENT WHEN USER ENTERS @ TO TERMINATE THE CURRENT DOCUMENT

... TRUNCATED

END OF A TOO-LONG ENTRY DROPPED. IF IN A MULTIPLE LINE SECTION, USER MAY ENTER '-' AND RETYPE THE LINE OR WAIT AND CORRECT IT LATER IN EDITOR.

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
4	DOCMNT	CREATED DOCUMENTS (ON PF SPACE)
	OUTPUT	FTN ERROR MESSAGES
5	TTY	TERMINAL INPUT/OUTPUT

METHOD

TTY IS PROMPTED FOR EACH SECTION OF THE DOCUMENT.

THE SECTIONS REQUESTED ARE DETERMINED BY THE SOURCE LANGUAGE AND TYPE OF ROUTINE.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CONNEC	DATE	EOF	IABS
MOVLEV	RECOVR	REMARK	SHIFT	

PART OF PROGRAM

AACOVER - DRIVER FOR MAIN PROGRAM COVER SHEET
 AAPROC - DRIVER FOR PROCEDURES
 AAPROG - DRIVER FOR (SUB)PROGRAMS
 ANYMOR - ASK IF ANY MORE DOCUMENTS TO BE CREATED
 ARITH - ASK FOR ARITHMETIC STATEMENT FUNCTIONS
 AUTHOR - ASK FOR AUTHORS
 CATGORY - ASK FOR FUNCTIONAL CATEGORY(IES)
 CATPRO - GET PROCEDURE NAME
 DATA - ASK FOR DATA CARD DESCRIPTION
 DECK1 - ASK IF *DECK CARDS DESIRED
 DEFPL - ASK FOR DEFAULT PL
 DOCIT - EXTEND MAIN PROGRAM COVER SHEET TO 60 LINES
 ECHO1 - ASK IF ECHO DESIRED
 ENDIT - CLOSE PROGRAM AND PRINT SUMMARY
 EOJ - ABNORMAL TERMINATION ROUTINE
 ERRORS - ASK FOR ERROR MESSAGES
 EXAM - ASK FOR PROCEDURE EXAMPLES
 EXEC - ASK FOR EXECUTION INSTRUCTIONS
 EXEC1 - ASK FOR CM REQUIRED FOR SUBPROGRAM
 (ENTRY IN EXEC)
 EXEC2 - ASK FOR PROCEDURE MAX FL
 (ENTRY IN EXEC)
 FASTOPT - PROCESS EXECUTE CARD OPTION
 GET13 - GET VARIABLE LENGTH INFO AND PRINT IN COL 13
 GET16 - GET VARIABLE LENGTH INFO AND PRINT IN COL 16
 (ENTRY IN GET13)
 IIOO - ASK FOR INPUT/OUTPUT DESCRIPTION
 LANG1 - ASK FOR SOURCE LANGUAGE
 LOC - ASK FOR PROCEDURE LOCATION
 METH - ASK FOR METHOD DESCRIPTION
 OBJ - ASK FOR LOCATION OF SOURCE/OBJECT DECKS
 ONOFFSL - DYNAMIC REPRINT ON/OFF, SHORT/LONG PROMPT
 PARAM - ASK FOR SUBPROGRAM PARAMETERS
 PRMPT - ASK IF LONG/SHORT PROMPTING DESIRED
 PRODEF - ASK FOR DEFAULT BEGIN STATEMENT
 PROG - ASK FOR ROUTINE NAME
 PURP - ASK FOR PURPOSE
 REM - ASK FOR REMARKS
 SUBS - ASK FOR SUBPROGRAMS REQUIRED
 TRUNC - PRINT TRUNCATED MESSAGE
 UNDER1 - ASK WHICH UNDERLINE CHARACTER DESIRED
 USAGE - ASK FOR SUBPROGRAM USAGE INFO
 WRIT - ASK FOR DATES WRITTEN AND REVISED

OTHERS

ADJL - SQUEEZE LEFT (SPACE BETWEEN WORDS)
 ELTIME - ELAPSED TIME COMPUTATIONS
 FINDWRD - SEARCH ARRAY FOR WORD
 FSETFIT - SET FTN FIT
 GETLFNS - GET ACTUAL LOCAL FILE NAMES
 PAKLFT - SQUEEZE LEFT AND REMOVE BLANKS AND 00B
 REQUEST - REQUEST,DOCMNT,*PF.
 ZBLANK - CHANGE BLANKS TO 00B

ARITHMETIC STATEMENT FUNCTIONS

I11FMT - FAST I-FORMAT DECODE
L61FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L81FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 11/03/73

DATE(S) REVISED

11/19/73 - V1.1
03/24/75 - V1.2
12/01/75 - V1.3
03/17/76 - V1.4
03/31/76 - V1.5
05/07/76 - V1.6 - CHANGE CONTROL CHARACTER BACK SLASH TO @
(BECAUSE COM UNIT WON'T PRINT BACK SLASH)
08/30/76 - V2.0 - CHANGE ORDER OF DOCUMENT.
SHORTEN PROCESSING OF 'DATA CARD' SECTION.
10/20/76 - V2.1 - FIX SOME PROMPTING MESSAGES. MOVE PROMPT
FOR LANGUAGE TO ITS POSITION IN THE
DOCUMENT (AFTER FUNCTIONAL CATEGORIES).
TO AVOID CONFUSION WITH ECHO/NON-ECHO MODE
OF A TELETYPE, THE WORD 'ECHO' IS CHANGED
TO 'REPRINT' IN THIS PROGRAM. ALLOW
REPRINT TO BE TURNED ON/OFF DYNAMICALLY.
ALLOW LONG/SHORT PROMPTING TO BE CHANGED
DYNAMICALLY. ADD SEVERAL LANGUAGE
ABBREVIATIONS.
02/14/77 - V2.2 - ADD DEFAULT PL FOR FORTRAN MAIN PROGRAMS.
ADD SECTION OF ERROR MESSAGES FOR MAIN
PROGRAMS AND PROCEDURES.
04/20/77 - V2.3 - ADD MORE DEFAULTS FOR LANGUAGE.
REMOVE ONE OF TTY PROMPTER FILES
(PROGRAM LEAVES FILE 'TTY' CONNECTED).
CORRECT @ PROCESSING IN 2 PLACES.
08/09/77 - V2.4 - EXPAND EXECUTE CARD OPTION PARAMETER.
ADD MAIN PROGRAM COVER SHEET.

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DOCDAT'

PURPOSE

LIST DOCUMENT NAMES, DATES AND PAGE NUMBERS

FUNCTIONAL CATEGORIES: Q6 S0

LANGUAGE: FORTRAN IV EXTENDED

COMPUTER

CDC 6000

REMARKS

ASSUMES THE DOCUMENTS HAVE THE FORM:

*DECK <DOCNAME>

MM/DD/YY

...

<NAME> NN OF NN

EXECUTION

FROM BATCH AND TTY

BEGIN,DOCDATE,,<LIB>,<ID>,OUTPUT,<PASSWORDS>.

-OR-

ATTACH,TAPE1,.... << DOCUMENTATION FILE

ATTACH,UTILITY.

LDSET,LIB=UTILITY. -OR- LIBRARY,UTILITY.

DOCDAT.

FROM TTY

BEGIN,DOCDATE,,<LIB>,<ID>,OUTPUT,<PASSWORDS>.

-OR-

ATTACH,TAPE1,.... << DOCUMENTATION FILE

BEGIN,ANYLIB,UTILITY,,DOCDAT.,OUT.

ROUTE,OUT,DC=PR,....

EXECUTE CARD PARAMETERS

DOCDAT,INFILE,OUTPUT.

INFILE - INPUT DOCUMENT FILE

OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

DOCDATE,TAPE1,OUTPUT.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 17000B

ERROR MESSAGES

INPUT FILE EMPTY

SELF-EXPLANATORY

INPUT/OUTPUT UNITS

UNIT #

LFN

USE

TAPE1

INPUT DOCUMENT FILE

OUTPUT

LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	DATE	FILESQ	GET
IFETCH	OPENM	TIME		

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
MOVECM - MOVE ARRAY
MOVSTR - MOVE CHARACTER STRING

ARITHMETIC STATEMENT FUNCTIONS

L51FMT - FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 1977 OR 1978

DATE(S) REVISED

02/05/80 - REDO OUTPUT FORMAT

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DOCIT'

PURPOSE

ADD PAGING TO ONE OR MORE DOCUMENTS

FUNCTIONAL CATEGORIES: Q6

LANGUAGE: FORTRAN IV EXTENDED

COMPUTER

CDC 6000

REMARKS

NORMALLY, PROGRAM 'DOC' (OR 'MTDOC') IS USED TO CREATE THE DOCUMENT(S). AN EDITOR IS THEN USED TO MODIFY IT/THEM AND INDICATE THE START OF EACH PAGE. PROGRAM 'LINER' MAY BE USED TO CHECK PAGE LENGTHS. FINALLY, 'DOCIT' WILL INCREASE EACH PAGE TO 60 OR 80 LINES (FOR 6 OR 8 LINES PER INCH, RESPECTIVELY) AND ADD THE DATE, DOCUMENT NAME AND PAGE NUMBER AT THE BOTTOM OF EACH PAGE.

DOCUMENT LINES HAVE THE FOLLOWING FORMAT:

COL	CONTENTS
1	CARRIAGE CONTROL ('1', ' ', '0', '-', '+', 'Q', 'R', 'S', 'T', 'V', 'VC')
	THE FOLLOWING SPECIAL CARRIAGE CONTROL CHARACTERS ARE RECOGNIZED:
	Q - LINE COPIED
	R - LINE COPIED
	S - LINE COPIED AND LINES PER PAGE SET TO 60
	T - LINE COPIED AND LINES PER PAGE SET TO 80
	V - LINE COPIED
	VC - THIS LINE AND NEXT LINE COPIED
	THESE CHARACTERS DO NOT ALTER THE LINE COUNT.
2-80	LINE TO BE PRINTED

THE LAST LINE OF EACH PAGE (PRODUCED BY DOCIT) WILL BE CREATED BY DOCIT IN THE FOLLOWING FORMAT:

COL	CONTENTS
1	CARRIAGE CONTROL (' ', '0')
2-9	DATE (MM/DD/YY)
55-61	DOCUMENT NAME
63	'-'
65-66	PAGE NUMBER
68-69	'OF'
71-72	TOTAL NUMBER OF PAGES

THE DOCUMENT NAME IS TAKEN FROM LINES HAVING '1' IN COLUMN 1 AND THE FOLLOWING CHARACTER STRINGS STARTING IN COLUMN 10:

FUNCTION '<NAME>'
LIBRARY '<NAME>'
PACKAGE '<NAME>'
PROCEDURE '<NAME>'
PROGRAM '<NAME>'
SUBROUTINE '<NAME>'
TAPE '<TAPENO>'

WHERE <NAME> IS 1-7 CHARACTERS; <TAPEND> IS 1-6 CHARACTERS.

IF THE FIRST LINE OF A DOCUMENT DOES NOT HAVE ONE OF THE ABOVE CHARACTER STRINGS, THE DOCUMENT NAME IS TAKEN FROM THE 5TH PARAMETER ON THE EXECUTE CARD.

IF THE FIRST CARD OF THE INPUT FILE HAS '*DECK' IN COL 1-6, MULTIPLE-DOCUMENT PROCESSING IS INITIATED. IN THIS MODE, THE DOCUMENT NAMES ARE TAKEN FROM THE *DECK CARDS AND DOCIT WILL COUNT THE PAGES IN EACH DOCUMENT. EXECUTE CARD PARAMETERS MAXPAGE AND NAME ARE IGNORED. NOTE THAT AN EMPTY DOCUMENT (2 *DECK CARDS TOGETHER OR A *DECK AT THE END) WILL CAUSE UNPREDICTED RESULTS.

EACH DOCUMENT IS ASSUMED TO BE 6 LINES PER INCH. DOCUMENTS WHICH ARE 8 LPI ARE RESET TO 6 LPI AFTER THE DOCUMENT AND BEFORE THE NEXT DOCUMENT, IF ANY.

BOTH THE INPUT AND OUTPUT FILES ARE REWOUND BEFORE AND AFTER USE.

EXECUTION

FROM BATCH

NOT DESIGNED FOR BATCH USE

FROM TTY

CONNECT,OUTPUT

ATTACH,UTILITY.

LIBRARY,UTILITY.

DOC.

(CREATE DOCUMENT ON FILE 'DOCMNT')

EDITOR

EDIT.DOCMNT,S

(MODIFY, IF NECESSARY. INDICATE START OF EACH PAGE BY PUTTING A '1' IN COLUMN 1 OF EACH LINE WHICH IS TO BE THE FIRST LINE OF A PAGE.)

SAVE,NEWDOC,N

(INSTEAD OF THE EDITOR/EDIT/.../SAVE SEQUENCE, ANOTHER EDITING PROGRAM MAY BE USED, SUCH AS:

ATTACH,NETED.

NETED.DOCMNT

(MODIFY, ETC.)

SAVE NEWDOC

LINER,NEWDOC.

(WILL COUNT PAGES AND NUMBER OF LINES PER PAGE. IF ANY PAGE HAS MORE THAN 59 OR 79 LINES, GO BACK AND RESTRUCTURE.)

BYE

DOCIT,NEWDOC.FILE.

(DO SOMETHING WITH 'FILE' -- PERHAPS USE PROCEDURES 'DOCADD' OR 'DOCREPL' TO PUT IT INTO A DOCUMENT FILE)

EXECUTE CARD PARAMETERS

DOCIT,INFILE,OUTFILE,MAXPAGE,DATE,NAME,OUTPUT.
 INFILE - INPUT FILE (REWOUND BEFORE AND AFTER)
 OUTFILE - OUTPUT FILE (REWOUND BEFORE AND AFTER)
 MAXPAGE - MAXIMUM NUMBER OF PAGES IN DOCUMENT (1-99)
 (IF OMITTED, PROGRAM WILL COUNT PAGES)
 (IGNORED IN *DECK MODE. SEE REMARKS)
 DATE - DATE TO BE PUT ON BOTTOM LINE OF EACH
 DOCUMENT (MMDDYY)
 (IF OMITTED, CURRENT DATE WILL BE USED)
 NAME - NAME OF DOCUMENT
 (WILL BE USED ONLY IF NAME CANNOT BE FOUND
 ON FIRST LINE OF DOCUMENT)
 (IGNORED IN *DECK MODE. SEE REMARKS)
 OUTPUT - LISTABLE OUTPUT (ERROR MESSAGES)

DEFAULT EXECUTE CARD

DOCIT,TAPE1,TAPE2,...,OUTPUT.

FL NEEDED TO LOAD: 33000B

FL NEEDED TO RUN : 23000B

ERROR MESSAGES

ABEND

PROGRAM TERMINATED ABNORMALLY

***** CARD NO. <NNN> IN DECK <NAME> <CARD-IMAGE>
 ***** ERROR - ABOVE CARD HAS INVALID CARRIAGE CONTROL
 CHARACTER (<CC>)
 MESSAGE APPEARS ON OUTPUT FILE. CORRECT ERROR AND
 RE-EXECUTE PROGRAM.

<NNNNN> ERRORS - JOB TERMINATED
 <NNNNN> IS NUMBER OF INVALID CARRIAGE CONTROL CHARACTERS
 ENCOUNTERED. CORRECT ERRORS AND RE-EXECUTE PROGRAM.

INPUT FILE EMPTY
 INPUT FILE HAS NO INFORMATION

INVALID CC - TERMINATED
 AN UNRECOGNIZED CARRIAGE CONTROL CHARACTER WAS
 ENCOUNTERED AND PROGRAM TERMINATED. ERROR IS LISTED
 ON OUTPUT FILE. CORRECT AND RE-EXECUTE PROGRAM.

NO PAGES ENCOUNTERED
 NO CARRIAGE CONTROL '1' FOUND WHILE COUNTING
 PAGES. MAY OR MAY NOT BE A DOCUMENT.

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
-----	-----	-----
	DAYFILE	ERROR MESSAGES AND MESSAGES GIVING DOCUMENT NAME, DATE AND NUMBER OF PAGES
	OUTPUT	LISTABLE OUTPUT (ERROR MESSAGES)
	TAPE1	INPUT FILE
	TAPE2	OUTPUT FILE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	DATE	FILESQ	GET
IFETCH	MAXO	MINO	MOD	MOVLEV
OR	OPENM	PUT	RECOVR	REMARK
SHIFT				

PART OF PROGRAM

COUNT - COUNT PAGES (NO *DECK)
 DCOUNT - COUNT PAGES (*DECK)
 DFMSG - DAYFILE MESSAGES
 ENDIT - TERMINATE PROGRAM
 EOJ - ABNORMAL TERMINATION ROUTINE
 INITAPE - INITIALIZE TAPES
 INITLIZ - INITIALIZE PROGRAM
 NODEK - NO *DECK PROCESSING
 PROCESS - DOCUMENT PROCESSOR
 PROCDEK - *DECK PROCESSOR

OTHERS

ADJL - SHIFT LEFT ENGLISH WORDS
 GETLFNS - GET ACTUAL LOCAL FILE NAMES
 IFMTEN - FAST I-FORMAT ENCODE
 IFMTV - FAST VARIABLE I-FORMAT DECODE
 MOVSTR - MOVE CHARACTER STRING
 PUTCH4 - INSERT CHARACTER INTO STRING
 REPLAC - REPLACE ONE CHARACTER WITH ANOTHER
 REQUEST - REQUEST, TAPE2, *PF.

ARITHMETIC STATEMENT FUNCTIONS

FAST A-FORMAT DECODE (LEFT-ADJ, BLANK-FILLED)
 A66FMT A81FMT A88FMT A810FMT
 FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
 L11FMT L21FMT L23FMT L25FMT L51FMT
 L61FMT L77FMT L81FMT L91FMT
 FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)
 R11FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 05/04/76 (VERSION 1.0)

DATE(S) REVISED

05/05/76 - V1.1 -
 06/21/76 - V1.2 - ADD SCAN FOR MTDIC OUTPUT AND OPTIONAL
 NAME ON EXECUTE CARD
 08/30/76 - V1.3 - MOVE FUNCTION NAME EXTRACTION 2 COLUMNS
 TO THE RIGHT. ACCEPT AND IGNORE (COPY)
 *DECK CARD. CHANGED IN V2.0!
 10/18/76 - V1.4 - CHANGE OUTPUT TO TAPE2 ('OUTPUT' IS FOR
 ERROR MESSAGES).
 - REWIND INFILE AND OUTFILE BEFORE AND
 AFTER.
 - LET PROGRAM COUNT PAGES.
 - DOCUMENT NAME AND PAGE NUMBER MOVED
 LEFT 1 COLUMN ON BOTTOM LINES.

- 06/02/77 - V1.5 - ALLOW FOR 6/8 LPI.
- CONVERT OUTPUT FILE TO 6RM.
- ADD DOCUMENT TYPE TO BOTTOM LINE OF DOCUMENT.
- 01/10/78 - V2.0 - COMPLETE REWRITE:
- CORRECT 'BLANK' PROBLEM WITH VERY SHORT NAME PARAMETER ON EXECUTE CARD.
- REMOVE DOCUMENT TYPE FROM BOTTOM LINE.
- ADD MULTIPLE-DOCUMENT CAPABILITY (SEVERAL DOCUMENTS, EACH STARTING WITH *DECK).
- 03/01/80 - V2.1 - ADD LIBRARY AND PACKAGE TO LIST OF DOCUMENT TYPES.

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DOCUMNT'

PURPOSE

MAINTAIN A FILE OF DOCUMENTS

FUNCTIONAL CATEGORIES: Q6 S0 K1

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

EACH DOCUMENT IN A DOCUMENT FILE IS PRECEDED BY A
CARD WITH '*DECK' IN COLUMNS 1-6 AND A 1-7-CHARACTER
DECK NAME IN COLUMNS 7-13.

EXECUTION

FROM BATCH AND TTY

ATTACH,UTILITY.

ATTACH,OLD,..... (OLD DOCUMENT FILE)

LIBRARY,UTILITY.

DOCUMNT,.....

CATALOG,NEW,..... (NEW DOCUMENT FILE)

EXECUTE CARD PARAMETERS

DOCUMNT,OLD,NEW,FCN,PROG,AFTER,IN,GID1,GID2,OUTPUT.

OLD - OLD DOCUMENT FILE

NEW - NEW DOCUMENT FILE

(ALSO OUTPUT OF G FUNCTION)

FCN - FUNCTION

A - ADD A DOCUMENT

D - DELETE A DOCUMENT

G - GET A DOCUMENT

(IF NEW OMITTED, NEW=PROG)

R - REPLACE A DOCUMENT

(IF PROG NOT FOUND, FCN CHANGED TO A)

PROG - DOCUMENT NAME

AFTER - FOR ADD FUNCTION, LOCATION OF NEW
DOCUMENT IN DOCUMENT FILE

OMITTED - PROG IS ADDED ALPHABETICALLY

O - PROG IS ADDED AT START OF FILE

END - PROG IS ADDED AT END OF FILE

OTHER - PROG IS ADDED AFTER THIS DOCUMENT

IN - INPUT FILE FOR NEW DOCUMENT
REWOUND BEFORE AND AFTER USE
MUST NOT CONTAIN *DECK CARD

GID1 - RESERVED FOR FUTURE USE

GID2 - RESERVED FOR FUTURE USE

OUTPUT - FTN ERROR MESSAGES

(PROGRAM MESSAGES ARE PUT INTO THE DAYFILE)

DEFAULT EXECUTE CARD

DOCUMNT,OLD,NEW,,PROG,AFTER,IN,GID1,GID2,OUTPUT.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 22000B

INPUT/OUTPUT UNITS | UNIT # | LFN | USE | |--------|-----|-----------------------------| | IN | | INPUT FILE FOR NEW DOCUMENT | | NEW | | NEW DOCUMENT FILE | | OLD | | OLD DOCUMENT FILE | | OUTPUT | | FTN ERROR MESSAGES |

UNIT #	LFN	USE
IN		INPUT FILE FOR NEW DOCUMENT
NEW		NEW DOCUMENT FILE
OLD		OLD DOCUMENT FILE
OUTPUT		FTN ERROR MESSAGES

EXAMPLES

ASSUME THE OLD DOCUMENT FILE (ON LFN OLD) HAS THE FOLLOWING DOCUMENTS: A, B, D, F, G, H.

TO ADD DOCUMENT C (ON LFN CC) IN ALPHABETICAL ORDER:
 DOCUMNT,...A,C,.CC.
 THE NEW DOCUMENT FILE WILL HAVE: A, B, C, D, F, G, H.

TO ADD DOCUMENT C (ON LFN CC) AT START OF THE FILE:
 DOCUMNT,...A,C,0,CC.
 THE NEW DOCUMENT FILE WILL HAVE: C, A, B, D, F, G, H.

TO ADD DOCUMENT C (ON LFN CC) AT THE END OF THE FILE:
 DOCUMNT,...A,C,END,CC.
 THE NEW DOCUMENT FILE WILL HAVE: A, B, D, F, G, H, C.

TO ADD DOCUMENT C (ON LFN CC) AFTER DOCUMENT F:
 DOCUMNT,...A,C,F,CC.
 THE NEW DOCUMENT FILE WILL HAVE: A, B, D, F, C, G, H.

TO DELETE DOCUMENT G:
 DOCUMNT,...D,G.
 THE NEW DOCUMENT FILE WILL HAVE: A, B, D, F, H.

TO REPLACE DOCUMENT F (NEW DOCUMENT ON LFN FF):
 DOCUMNT,...R,F,.FF.
 THE NEW DOCUMENT FILE WILL HAVE: A, B, D, F, G, H.

TO REPLACE DOCUMENT E (NEW DOCUMENT ON LFN EE):
 DOCUMNT,...R,E,.EE.
 THE NEW DOCUMENT FILE WILL HAVE: A, B, D, E, F, G, H.
 NOTE THAT SINCE E DID NOT EXIST, REPLACE FUNCTION WAS CHANGED TO ADD (DOCUMNT,...A,E,.EE.). BECAUSE THE AFTER PARAMETER WAS OMITTED, E WAS ADDED ALPHABETICALLY.

TO GET (EXTRACT) DOCUMENT D:
 DOCUMNT,...G,D. (DOCUMENT WILL BE ON LFN G)
 DOCUMNT,...DD,G,D. (DOCUMENT WILL BE ON LFN DD)

AD-A103 030

DAVID W TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CE--ETC F/6 9/2
COMPUTER CENTER CDC LIBRARIES/UTILITY (PROGRAMS). (U)

FEB 81 D V SOMMER

DTNSRDC/CMLD-81-09

UNCLASSIFIED

NL

2 of 2
410 50 00



END

DATE

FILED

81

DTIC

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	FILESQ	IFETCH	MOVLEV	OPENM
PUT	RECOVR	REMARK	SHIFT	

PART OF PROGRAM

COPY - COPY DOCUMENT FILE
EQJ - ABNORMAL TERMINATION ROUTINE
NEW - READ AND ADD NEW DOCUMENT

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
REPLAC - REPLACE ONE CHARACTER WITH ANOTHER
REQUEST - REQUEST, NEW, *PF.
VFILL - FILL ARRAY WITH WORD

ARITHMETIC STATEMENT FUNCTIONS

FAST A-FORMAT DECODE (LEFT-ADJ, BLANK-FILLED)
A35FMT
FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L21FMT L41FMT L51FMT L61FMT L77FMT
L81FMT
FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)
R41FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATA WRITTEN: 01/20/76

DATE(S) REVISED

04/08/76
03/09/79 - REMOVE TRAILING BLANKS FROM DOCUMENT LINES

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'EOFAD'

PURPOSE

ADD OR DELETE EOF'S TO/FROM A FILE (THRU EOF)

FUNCTIONAL CATEGORIES: QO

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

THIS PROGRAM WAS WRITTEN FOR USE WITH THE BR2CCL PROCEDURE WHICH CONVERTS BEGIN/REVERT PROCEDURES TO CDC CYBER CONTROL LANGUAGE. THIS PROGRAM ADDS AN EOF EVERY TIME AN EOR IS ENCOUNTERED (BETWEEN PROCEDURES). IT WILL ALSO REMOVE ANY EOF'S PUT IN BY THE CONVERSION PROGRAM, LEAVING A SINGLE FILE WITH THE PROCEDURES SEPARATED BY EOR'S.

EXECUTION

FROM BATCH

ATTACH,TAPE1,..... (FILE TO BE PROCESSED)
ATTACH,UTILITY.
EOFAD,*,..... (USER MUST SUPPLY * VALUE)
(DO SOMETHING WITH TAPE2)

FROM TTY

ATTACH,TAPE1,..... (FILE TO BE PROCESSED)
BEGIN,UTILITY,,EOFAD,*,..... (USER MUST SUPPLY * VALUE)
(DO SOMETHING WITH TAPE2)

EXECUTE CARD PARAMETERS

EOFAD,WHICH,INFILE,OUTFILE,OUTPUT.
WHICH - ADD/DELETE OPTION (REQUIRED)
 A OR ADD - ADD EOF'S
 D OR DEL OR DELETE - DELETE EOF'S
INFILE - FILE TO BE PROCESSED
OUTFILE - OUTPUT FILE
OUTPUT - LISTABLE OUTPUT (FTN ERROR MSGS)

DEFAULT EXECUTE CARD

EOFAD,*,TAPE1,TAPE2,OUTPUT.
(* - USER MUST SUPPLY)

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 25000B

FL NEEDED TO RUN : 15000B

ERROR MESSAGES

INPUT FILE EMPTY
INPUT FILE HAS NO INFORMATION

INVALID FIRST PARAMETER

<WHICH> PARAMETER MUST BE ONE OF: A, ADD, D, DEL, DELETE

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
	OUTPUT	LISTABLE OUTPUT (FTN ERROR MESSAGES)
	TAPE1	INPUT FILE TO BE PROCESSED
	TAPE2	OUTPUT FILE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	ENDFILE	FILESQ	GET	IFETCH
OPENM	PUT	WEOR		

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
 LASTC - FIND LAST NON-BLANK CHARACTER IN AN ARRAY

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 01/18/78

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'EOI'

PURPOSE

POSITION A FILE AT END-OF-INFORMATION (EOI)

FUNCTIONAL CATEGORIES: Q3

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

NONE

EXECUTION

FROM BATCH AND TTY
BEGIN,UTILITY,,EOI,<FILE>.

EXECUTE CARD PARAMETERS

EOI,INFILE,OUTPUT.
INFILE - FILE TO BE POSITIONED
OUTPUT - FTN ERROR MESSAGES

DEFAULT EXECUTE CARD
EOI,TAPE1,OUTPUT.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 27000B
FL NEEDED TO RUN : 16000B

INPUT/OUTPUT UNITS

UNIT	#	LFN	USE
-----	-----	-----	-----
		INFILE	FILE TO BE POSITIONED
		OUTPUT	FTN ERROR MESSAGES

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM ENCODE FILESQ OPENM REMARK

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES

ARITHMETIC STATEMENT FUNCTIONS

L61FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 06/09/78

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'EXECARD'

PURPOSE

EXTRACT EXECUTE CARD PARAMETER/SUBPROGRAM USAGE/PROCEDURE
USAGE INFORMATION FROM DOCUMENTATION FILES (WHICH WERE
PREPARED IN THE FORMAT GENERATED BY PROGRAM 'DOC')

FUNCTIONAL CATEGORIES: SO Q6

REMARKS

DOCUMENTATION FILE IS COMPATIBLE WITH AN UPDATE 'SOURCE'
FILE OF *DECK'S ONLY.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND DATE EOF MOVLEV OR
RECOVR REMARK SHIFT TIME

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

FSETFIT - SET FIT VALUES
GETLFNS - GET ACTUAL FILE NAMES
PAKLFT - SQUEEZE BLANKS AND ZEROS OUT OF PFN
ZPFUNC - ATTACH DOCUMENTATION FILE

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L11FMT L21FMT L51FMT L61FMT L77FMT
L710FMT L81FMT
FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)
R92FMT

INPUT/OUTPUT UNITS

UNIT # LFN

USE

1 ZZDOC

FILE CONTAINING DOCUMENTATION
(ATTACHED AND RETURNED WITHIN PROGRAM)
(IF THE USER REPLACES THE FILE NAME AT
EXECUTION TIME, THE FILE IS ASSUMED TO
BE ALREADY ATTACHED AND WILL NOT BE
RETURNED)

OUTPUT LISTABLE OUTPUT

EXECUTION

FROM BATCH

BEGIN,UTILITY,.EXECARD,LIBRARY,ID.

FROM TTY

BEGIN,UTILITY,.EXECARD,LIBRARY,,ID,ANY,....
ROUTE,ANY,DC=PR.....

EXECUTE CARD PARAMETERS

EXECARD, LIBRARY, ID, OUTPUT, LEFT, FULL, DOCFILE.

LIBRARY - NAME OF LIBRARY TO BE EXTRACTED
MAY BE ONE OF:

NSRDC

UTILITY (DEFAULT)

ANY OTHER LIBRARY NAME (1-7 CHAR)

PROGRAM WILL ATTACH AND RETURN THE
DOCUMENTATION FILE. THE PFN USED WILL BE
THE LIBRARY NAME SPECIFIED, FOLLOWED BY
'DOCUMENTATION' (DEFAULT IS
'UTILITYDOCUMENTATION')

ID - ID UNDER WHICH DOCUMENTATION IS CATALOGED
(DEFAULT IS THE SYSTEM PUBLIC ACCESS ID)

OUTPUT - LISTABLE OUTPUT

LEFT - PRINT CENTERING

OMITTED OR 'LEFT' - LEFT-JUSTIFIED ON PAGE
ANYTHING ELSE - CENTERED ON LARGE PAGE
(DEFAULT IS LEFT-JUSTIFIED)

FULL - OMITTED OR 'FULL' - PRINT ONE OF:

A) PROGRAM EXECUTE CARD, DESCRIPTION OF
PARAMETERS, DEFAULT EXECUTE CARD:

B) SUBPROGRAM USAGE AND DESCRIPTION OF
PARAMETERS:

C) PROCEDURE USAGE, DESCRIPTION OF
PARAMETERS AND DEFAULT BEGIN STATEMENT
ANYTHING ELSE - PRINT ONLY EXECUTE CARD
OR SUBPROGRAM USAGE OR PROCEDURE USAGE

DOCFILE - IF USER HAS PREVIOUSLY ATTACHED A
DOCUMENTATION FILE, PLACE LFN HERE AND OMIT
THE FIRST 2 PARAMETERS ('LIBRARY' AND 'ID').
WHEN THIS PARAMETER IS USED AND IS NOT
'ZZDOC', THE FILE IS NOT RETURNED AT END OF
EXECUTION.

DEFAULT EXECUTE CARD

EXECARD, UTILITY, *---*, OUTPUT, LEFT, FULL, ZZDOC.

FL NEEDED TO LOAD: 30000B

FL NEEDED TO RUN : 20000B

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 05/03/76

DATE(S) REVISED

05/05/76

05/18/76

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'FRAME'

PURPOSE

PRINT A FRAME FOR LINING UP PRINTOUTS

FUNCTIONAL CATEGORIES: 01

LANGUAGE: FORTRAN IV EXTENDED

COMPUTER

CDC 6000

REMARKS

NONE

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LDSET,LIB=UTILITY.

FRAME,<WHICH>,...

FROM TTY

ATTACH,UTILITY.

LIBRARY,UTILITY.

FRAME,<WHICH>,<OUTPUT>,...

EXECUTE CARD PARAMETERS

FRAME,WHICH,OUTFILE,COPIES.

WHICH - WHICH FRAME IS TO BE PRINTED. THE FOLLOWING
ARE SUPPORTED:

1T - 60-LINE FRAME FOR 1T (NARROW PAPER)

THE FRAME IN FROM COLUMN 2 THRU 73.

OUTFILE - LISTABLE OUTPUT

COPIES - NUMBER OF COPIES TO BE PRINTED

DEFAULT EXECUTE CARD

FRAME,1T,OUTPUT,2.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 26000B

FL NEEDED TO RUN : 14000B

ERROR MESSAGES

INVALID TYPE

THE VALUE OF <WHICH> IS NOT SUPPORTED.

OUTPUT UNITS

UNIT #

LFN

USE

OUTPUT

LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

MAXO MINO

PART OF PROGRAM

P1T - PRINT 1T FRAME

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES

IFMTV - FAST I-FORMAT DECODE

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 01/16/81

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'GETOBJ'

PURPOSE

EXTRACT ONE OBJECT MODULE FROM A SEQUENTIAL OBJECT FILE
OR AN EDITLIB USER LIBRARY

FUNCTIONAL CATEGORIES: K3

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

IF THE OBJECT FILE IS SEQUENTIAL (SUCH AS THE OUTPUT OF A
COMPILER), THE FIRST OCCURRENCE OF THE SPECIFIED MODULE
IS EXTRACTED. IF THE OBJECT FILE IS AN EDITLIB USER
LIBRARY, THE LAST OCCURRENCE IS EXTRACTED.

EXECUTION

FROM BATCH AND TTY
ATTACH,TAPE1,..... (INPUT FILE)
BEGIN,UTILITY,,GETOBJ,,ROUTINE,....

EXECUTE CARD PARAMETERS

GETOBJ,INFILE,ROUTINE,OUTFILE,LIB,OUTPUT.
INFILE - INPUT OBJECT FILE
ROUTINE - NAME OF DESIRED ROUTINE
(1-7 CHARACTERS)
OUTFILE - WILL CONTAIN EXTRACTED ROUTINE
LIB - OMITTED - INFILE IS SEQUENTIAL
LIB - INFILE IS EDITLIB USER LIBRARY
OUTPUT - FTN ERROR MESSAGES

DEFAULT EXECUTE CARD

GETOBJ,TAPE1,RTN,TAPE2,,OUTPUT.

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 21000B

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
-----	-----	-----
	OUTPUT	FTN ERROR MESSAGES
	TAPE1	INPUT OBJECT FILE
	TAPE2	OUTPUT FILE CONTAINING EXTRACTED MODULE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	FILESQ	GET	IFETCH	OPENM
PUT	REMARK	REWND	SHIFT	STOREF
WEOR				

PART OF PROGRAM

LOCLIB - LOCATE MODULE IN AN EDITLIB USER LIBRARY

LOCSEQ - LOCATE MODULE IN A SEQUENTIAL FILE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES

ARITHMETIC STATEMENT FUNCTIONS

L81FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

R21FMT - FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 11/18/76

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'GETREV'

PURPOSE

EXTRACT ALL PAGES FROM A MANUAL WHICH WERE MODIFIED AFTER
USER-SPECIFIED DATE

FUNCTIONAL CATEGORIES: S0 01

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

THE FIRST LINE OF EACH PAGE MUST HAVE THE FOLLOWING FORMAT:

COL	CONTENTS
1	'1'
6-14	DATE (MON YEAR) (E.G., 'SEPT 1978')
60-64	'PAGE '
65-74	PAGE NUMBER (E.G., '4-6.1')

THE TITLE PAGE AND THE 'R' PAGES ARE ALWAYS PRINTED.

EXECUTION

FROM BATCH

ATTACH,INFILE,.... (MANUAL TO BE PROCESSED)
BEGIN,UTILITY,GETREV,,MONTH,YEAR.

FROM TTY

ATTACH,INFILE,.... (MANUAL TO BE PROCESSED)
BEGIN,UTILITY,GETREV,,MONTH,YEAR.OUT.
ROUTE,OUT,DC=PR,....

EXECUTE CARD PARAMETERS

GETREV,INFILE,MONTH,YEAR,OUTPUT,PM.
INFILE - INPUT FILE (MANUAL TO BE PROCESSED)
MONTH - FIRST 3-4 CHARACTERS OF MONTH (E.G., JAN.
FEB, ETC.) OR THE APPROPRIATE DIGITS
(1-12)
YEAR - 2 OR 4 DIGITS OF YEAR (E.G., 76, 1976)
(ALL PAGES MODIFIED AFTER MONTH,YEAR WILL BE
PRINTED)
OUTPUT - LISTABLE OUTPUT
PM - OMITTED OR 'NOPM' - DO NOT PUT 'PM'
MESSAGES AT START AND
END OF OUTPUT
'C' - PRINT CENTERED ON WIDE
PAGE. NO 'PM' MSGS.
ANYTHING ELSE - PUT THE MESSAGE
'PM 1-PART NARROW
UNLINED PAPER'
AT START OF OUTPUT AND
'PM RESTORE PRINTER'
AT THE END
USE ONLY FOR TERMINALS WHICH WILL SUPPORT
'PM' MESSAGES

DEFAULT EXECUTE CARD

GETREV,INFILE,0.0,OUTPUT,NOPM.
(WILL PRINT ENTIRE MANUAL BUT IS NOT EFFICIENT)

FL NEEDED TO LOAD: 30000B
FL NEEDED TO RUN : 20000B

ERROR MESSAGES

ABEND

PROGRAM TERMINATED ABNORMALLY

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
-----	-----	-----
	INFILE	MANUAL TO BE PROCESSED
	OUTPUT	LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	FILESQ	GET	IFETCH
OPENM	RECOVR	REMARK	SHIFT	

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

FINDWRD - SEARCH ARRAY FOR WORD
GETLFNS - GET ACTUAL LOCAL FILE NAMES
IFMTV - FAST VARIABLE I-FORMAT DECODE

ARITHMETIC STATEMENT FUNCTIONS

FAST I-FORMAT DECODE

I23FMT

FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)

L11FMT L36FMT L61FMT L81FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 04/12/78

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'HEXDMP'

PURPOSE

DUMP 9-TRACK TAPE IN HEXADECIMAL FORMAT

FUNCTIONAL CATEGORIES: J9 K4

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

ACCEPTS VARIABLE LENGTH RECORDS UP TO 5120 CDC CHARACTERS.
DUMPS SPECIFIED NUMBER OF RECORDS (PRUS IF S TAPE) UP
TO ONE FILE. TAPE POSITIONING MAY BE DONE BY SKIPF
CONTROL CARD. AFTER ANY PARITY ERROR, PROGRAM PRINTS
"PARITY ERROR ON RECORD ..." AND CONTINUES. OUTPUT IS
RECORD NUMBER AND SIZE FOLLOWED BY LINES OF 120 HEX
CHARACTERS.

IN THE SPECIAL CASE WHEN TYPE=1, EACH CDC WORD CONTAINS 10
HEX DIGITS. EACH 4-BIT HEX DIGIT OCCUPIES THE FIRST 4 BITS
OF EACH 6-BIT CHARACTER. HEXDMP WILL REMOVE THE EXTRA BITS
AND PRINT IN GROUPS OF 10 HEX DIGITS.

EXECUTION

FROM BATCH

REQUEST,TAPE1,HD,NORING,S,VSN=----. OR LABEL,----.
BEGIN,UTILITY,,HEXDMP,.....

FROM TTY

NOT USABLE FROM TTY

EXECUTE CARD PARAMETERS

HEXDMP(INFILE,START,NPRUS,OUTPUT,REW,TYPE,PL=NNNN)

INFILE - INPUT FILE

START - STARTING PRU/RECORD NUMBER (DECIMAL)
0 OR OMITTED - START AT BEGINNING OF FILE

NPRUS - NUMBER (DECIMAL) OF PRUS/RECORDS TO BE DUMPED
(DEFAULT: 9999999 - ALL OF FILE)

OUTPUT - LISTABLE OUTPUT

REW - INFILE REWIND OPTION

A - REWIND AFTER USE

B - REWIND BEFORE USE

R - REWIND BEFORE AND AFTER USE

U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE

OTHER - NO REWIND (DEFAULT)

(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)

TYPE - 1 - EACH HEX DIGIT IS TO BE FIRST 4 BITS
OF EACH 6-BIT CHARACTER (10 HEX
DIGITS PER WORD)

OTHER - NO SPECIAL HANDLING

NNNN - LINE LIMIT IF DESIRED

DEFAULT EXECUTE CARD
HEXDMP(TAPE1,1,9999999,OUTPUT,NOREW)

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 30000B
FL NEEDED TO RUN : 20000B
(PROGRAM REDUCES TO MINIMUM NEEDED TO RUN)

INPUT/OUTPUT UNITS

UNIT	#	LFN	USE
1		OUTPUT TAPE1	LISTABLE OUTPUT 9-TRACK TAPE TO BE DUMPED

EXAMPLES

HEXDMP(TAPE9,1,10) LIST FIRST 10 RECORDS ON TAPE9
HEXDMP(,20,5,PL=150) LIST RECORDS 20 THRU 24 ON TAPE1,
UP TO 150 LINES

METHOD

BUFFER IN, ODD PARITY

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

BUFFERIN LENGTH UNIT

PART OF PROGRAM

HEX1 - EXTRACT 4 OF EACH 6 BITS

PRT - NORMAL PRINT

PRT1 - PRINT FOR TYPE 1

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAME

IFMTV - FAST VARIABLE LENGTH I-FORMAT DECODE

SETREW - DECODE REWIND OPTION

UNLOAD - UNLOAD,INFILE.

AUTHOR

NORA TAYLOR - DTNSRDC CODE 189.1
SHARON GOOD - DTNSRDC CODE 1892.1
DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: JULY 1976

DATE(S) REVISED

OCTOBER 1976

03/03/77 - DVS - ADD 'TYPE' OPTION
ADD TYPE 1 CONVERSION
ACTIVATE REWIND OPTION

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'JOBTIME'

PURPOSE

PUT JOB CP EXECUTION TIME TO THIS POINT INTO DAYFILE

FUNCTIONAL CATEGORIES: Q0

AUTHOR

DAVID V SOMMER - NSRDC CODE 1892.2

DATE WRITTEN: 03/10/75

DATE(S) REVISED

REMARKS

NONE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

REMARK

OTHERS

NONE

EXECUTION

FROM BATCH AND TTY

ATTACH,UTILITY.

LIBRARY,UTILITY.

JOBTIME.

DEFAULT EXECUTE CARD

JOBTIME.

FL NEEDED TO LOAD: 21000B

LOCATION OF DECKS

SOURCE

TAPE LABELLED CSYSUT'LITYPL; P.F. UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LINER'

PURPOSE

COUNT LINES AND PAGES OF A FILE HAVING FIRST CHARACTER
CARRIAGE CONTROL

FUNCTIONAL CATEGORIES: Q0

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

NONE

EXECUTION

FROM BATCH

ATTACH,UTILITY.
LDSET,LIB=UTILITY.
ATTACH,TAPE1, . . . FILE TO BE PROCESSED
LINER.

FROM TTY

ATTACH,UTILITY.
LIBRARY,UTILITY.
ATTACH,TAPE1, . . . FILE TO BE PROCESSED
LINER.

EXECUTE CARD PARAMETERS

LINER,TAPE1,OUTPUT,REW.
TAPE1 - FILE TO BE PROCESSED
OUTPUT - LISTABLE OUTPUT
REW - REWIND OPTION FOR TAPE1
A - REWIND AFTER USE
B - REWIND BEFORE USE
R - REWIND BEFORE AND AFTER USE
U - REWIND BEFORE, REWIND AND UNLOAD
USE
OTHER - NO REWIND (DEFAULT)
(ANY WORDS BEGINNING WITH THESE LETTERS
WILL PRODUCE THE SAME RESULTS)

DEFAULT EXECUTE CARD

LINER,TAPE1,OUTPUT,NOREWIND.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 27000B

FL NEEDED TO RUN : 17000B

ERROR MESSAGES

INPUT FILE EMPTY

INPUT FILE CONTAINS NO INFORMATION

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
-----	-----	-----
	TAPE1	INPUT FILE
	OUTPUT	LISTABLE OUTPUT

METHOD
 CHAR ACTION

 1 ADD 1 TO PAGE COUNTER; RESTART LINE COUNTER
 SPACE ADD 1 TO LINE COUNTER
 0 ADD 2 TO LINE COUNTER
 - ADD 3 TO LINE COUNTER
 OTHER IGNORED

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	DATE	FILESQ	GET
IFETCH	OPENM	RECOVR	REMARK	SHIFT
TIME				

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
 SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

L11FMT - FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 05/31/73

DATE(S) REVISED

01/10/75
 03/22/76 - CHANGE TO RECORD MANAGER; THRU EOI; NOREWIND
 03/23/76 - CORRECT EOR PROBLEM
 11/20/78 - CORRECT TOTAL LINE COUNTING

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CL1B

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LINERL'

PURPOSE

LIST A DOCUMENT (CARRIAGE CONTROL IN COLUMN 1, ZERO BYTE
TERMINATED RECORDS) WITH RECORD COUNT AND COUNT OF LINES ON
EACH PAGE. LIST THRU END-OF-INFORMATION.

FUNCTIONAL CATEGORIES: 01 Q0

LANGUAGE: FORTRAN IV

REMARKS

MAY BE USED TO LIST A DOCUMENT CREATED BY PROGRAM 'DOC'
TO ASSIST IN DEFINING PAGES BEFORE USING PROGRAM 'DOCIT'
TO COMPLETE THE DOCUMENT.

EOR, EOF AND EOI ARE LISTED AND CAUSE LINE COUNT TO BE RESET
TO 0 (ZERO).

EXECUTION

FROM BATCH

BEGIN,UTILITY,,LINERL,INFILE.

FROM TTY

ATTACH OR OTHERWISE CREATE INFILE.
BEGIN,UTILITY,,LINERL,INFILE,OUT,R.
ROUTE,OUT,DC=PR,....

EXECUTE CARD PARAMETERS

LINERL,INFILE,OUTPUT,REW,LPI,START,INCR.

INFILE - INPUT DOCUMENT FILE

OUTPUT - LISTABLE OUTPUT

REW - INFILE REWIND OPTION

A - REWIND AFTER USE

B - REWIND BEFORE USE

R - REWIND BEFORE AND AFTER USE

U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE

OTHER - NO REWIND (DEFAULT)

(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)

LPI - LINES PER INCH

6 - 6 LINES PER INCH

ANYTHING ELSE - 8 LINES PER INCH (DEFAULT)

START - STARTING LINE NUMBER (DEFAULT: 1)

INCR - LINE NUMBER INCREMENT (DEFAULT: 1)

DEFAULT EXECUTE CARD

LINERL,TAPE1,OUTPUT,NOREW,8,1,1.

FL NEEDED TO LOAD: 27000B

FL NEEDED TO RUN : 17000B

INPUT/OUTPUT UNITS
UNIT # LFN

USE

OUTPUT LISTABLE OUTPUT
TAPE1 INPUT DOCUMENT FILE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND CLOSEM DATE FILESQ GET
IFETCH OPENM TIME

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
IFMTV - FAST VARIABLE I-FORMAT DECODE
SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

L11FMT - FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 08/31/76

DATE(S) REVISED

01/08/78 - MOVE PRINTOUT 1 PLACE TO RIGHT TO ALLOW MORE THAN
9999 LINES.

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LISTBIN'

PURPOSE

LIST BINARY MODULES AND PROCEDURES IN ONE OR MORE FILES

FUNCTIONAL CATEGORIES: Q7

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

INPUT FILE IS PROCESSED UNTIL:

- A) SPECIFIED NUMBER OF FILES. OR
- B) DOUBLE EOF

EXECUTION

FROM BATCH

ATTACH,TAPE1, (FILE TO BE LISTED)
BEGIN,UTILITY,,LISTBIN.

FROM TTY

ATTACH,UTILITY.
LIBRARY,UTILITY.
ATTACH,TAPE1, (FILE TO BE LISTED)
CONNECT,OUTPUT. OR LISTBIN,,ANY.
LISTBIN. ROUTE,ANY,DC=PR,....

EXECUTE CARD PARAMETERS

LISTBIN,INFILE,OUTPUT,NFILES,REW,EXTEND,ALPHA.

- INFILE - FILE TO BE LISTED
- OUTPUT - PRINTER OUTPUT
- NFILES - NUMBER OF FILES TO BE LISTED
(OMITTED OR INVALID = 1 FILE)
(NOTE: PROCESSING WILL STOP IF DOUBLE
EOF READ BEFORE SPECIFIED NUMBER OF FILES)
- REW - REWIND OPTION FOR TAPE1
 - A - REWIND AFTER USE
 - B - REWIND BEFORE USE
 - R - REWIND BEFORE AND AFTER USE
 - U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE
- OTHER - NO REWIND (DEFAULT)
(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)
- EXTEND - OMITTED OR 'NO' - DO NOT LIST DATE, TIME,
OS, ETC.
ANYTHING ELSE - LIST DATE, TIME, OS, ETC.
(OMIT FOR TTY AS OUTPUT IS MORE THAN 72
CHARACTERS)
- ALPHA - ALPHABETICAL LIST OF OBJECT MODULES OPTION
 - OMITTED - NO ALPHABETICAL LIST
 - TTY - ALPHABETICAL LIST TO FIT TTY
 - OTHER - WIDE PAGE LIST

DEFAULT EXECUTE CARD

LISTBIN,TAPE1,OUTPUT,1,NOREWIND.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 21000B

(PROGRAM ADJUSTS CORE UP AND DOWN AS REQUIRED)

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
1	OUTPUT TAPE1	LISTABLE OUTPUT FILE TO BE LISTED

METHOD

- 1) IF REQUESTED, FILE IS REWOUND.
- 2) THE FIRST 200 WORDS OF EACH LOGICAL RECORD ARE READ IN.
 - 2A) WORD 1 IS TESTED FOR PRFX TABLE (WORD 0 OF TABLE STARTS 7700B). IF NOT, THIS IS NOT AN OBJECT MODULE. FIRST 4 WORDS ARE PRINTED (PRECEDED BY '!'). IT IF IS AN OBJECT MODULE, THE NAME IS TAKEN FROM CHARACTERS 1-7 OF WORD 1 OF THE PREFIX TABLE.
 - 2B) TEST FOR PRESENCE OF PIDL (3400), ASCM(5000), APCM(5300) OR EAPCM (5400) TABLES AND GET OVERLAY NUMBER AND ROUTINE LENGTH, IF POSSIBLE.
 - 2C) GO BACK TO 2) UNTIL SPECIFIED NUMBER OF EOF'S OR DOUBLE EOF.
- 3) IF REQUESTED, THE FILE IS REWOUND OR UNLOADED.

REFERENCE: 60344200 - LOADER REFERENCE MANUAL - CHAPTER 8

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

DATE	LENGTH	MOD	RECOVR	REMARK
SHIFT	TIME	UNIT		
PART OF LANGUAGE				
EOJ	- ABNORMAL TERMINATION ROUTINE			
PRTBL	- PRINT ONE PAGE OF ALPHABETICAL LIST			
OTHERS				
ASORTMV	- SORT 2-DIMENSIONAL ARRAY USING MOVLEV			
GETLFNS	- GET ACTUAL FILE NAMES			
IFINDCH	- FIND SPECIFIED CHARACTER			
IFMTV	- FAST I-FORMAT DECODE			
MOVSTR	- MOVE CHARACTER STRING			
REDUCE	- ADJUST CORE UP AND DOWN			
SETREW	- DECODE REWIND OPTION			
UNLOAD	- RETURN.TAPE1.			

ARITHMETIC STATEMENT FUNCTIONS

FAST A-FORMAT DECODE (LEFT-ADJ, BLANK-FILLED)
A71FMT
FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L21FMT L38FMT L61FMT L71FMT
FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)
R13FMT R14FMT R21FMT R23FMT R35FMT
R38FMT R47FMT R51FMT R56FMT

AUTHOR
DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 11/18/74

DATE(S) REVISED

01/14/75
03/26/75
04/30/75
03/03/76
06/23/76
12/13/76 - ADD 54-TABLE PROCESSING
03/30/77 - ADD ALPHABETICAL LIST OPTION
02/17/78 - ADD SUPPORT FOR PROCEDURES

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LISTCMP'

PURPOSE

LIST AN UPDATE COMPILE FILE, EACH DECK BEGINNING ON A NEW PAGE WITH A BANNER PAGE PRECEDING IT

FUNCTIONAL CATEGORIES: Q7 01

REMARKS

A NEW DECK BEGINS:

A) AFTER END-OF-SECTION OR END-OF-PARTITION;

B) WITH CHANGE OF DECK NAME (COL 74-82) ONLY IF PREVIOUS CARD WAS FORTRAN END CARD (' END ' IN COL 1-20) OR COMPASS END CARD ('END ' IN COL 11-14).

THE CONDITIONS FOR B) ALLOW DECKS TO HAVE *COMDECK CALLS WITHOUT TRIGGERING A NEW DECK. (*COMDECK CALLS HAVE THE COMDECK NAME IN 74-82, WHICH IS USUALLY DIFFERENT FROM THE MAIN DECK NAME.)

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM FILESQ GET IFETCH MOD
OPENM RECOVR REMARK SHIFT

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

BANR - PRINT BANNER PAGE
GETLFNS - GET ACTUAL LOCAL FILE NAMES
MFETCH - READ WORD IN USER'S FL
REDUCE - REDUCE CORE TO MINIMUM NEEDED TO RUN
SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

A94FMT - FAST A-FORMAT DECODE (LEFT-ADJ. BLANK-FILLED)
L11FMT - FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)
L41FMT - FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

FORTRAN LOCAL
LOGICAL FILE
U N I T NAME

USE

TAPE1 INPUT COMPILE FILE
OUTPUT LISTABLE OUTPUT

EXECUTION

FROM BATCH

ATTACH,OLDPL,....
UPDATE,P,....
ATTACH,UTILITY.
LIBRARY,UTILITY.
LISTCMP.COMPILE.

FROM TTY

ATTACH,OLDPL,....
UPDATE,P,....
ATTACH,UTILITY.
LIBRARY,UTILITY.
LISTCMP.COMPILE,OUT.
DISPOSE.OUT,PR=XYX.

EXECUTE CARD PARAMETERS

LISTCMP,INFILE,OUTPUT,REW,LPI.

INFILE - INPUT INFILE

OUTPUT - LISTABLE OUTPUT

REW - REWIND OPTION FOR COMPILE FILE

A - REWIND AFTER USE

B - REWIND BEFORE USE

R - REWIND BEFORE AND AFTER USE
(DEFAULT)

U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE

OTHER - NO REWIND

(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)

LPI - LINES PER INCH FOR OUTPUT LISTING
OMITTED OR 'EIGHT' OR '8' - 8 LPI
ANYTHING ELSE - 6 LPI

DEFAULT EXECUTE CARD

LISTCMP.TAPE1,OUTPUT,REWIND,8.

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 21000B

(PROGRAM REDUCES TO MINIMUM NEEDED TO RUN)

AUTHOR

DAVID V SOMMER - NSRDC CODE 1892.2

DATE WRITTEN: 07/09/75

DATE(S) REVISED

01/07/76

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LISTEOI'

PURPOSE

LIST A FILE INSERTING *EOR, *EOF, *EOI WHERE APPROPRIATE

FUNCTIONAL CATEGORIES: 01

REMARKS

LISTING IS TO END-OF-INFORMATION.
RECORD LENGTH IS UP TO 90 CHARACTERS.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	CONNEC	FILESQ	GET	IFETCH
OPENM	RECOVR	REMARK	SHIFT	

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
MSEFIT - SET FTN FIT FIELD
SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

NONE

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
5	ZZTTY	TTY OUTPUT
	OUTPUT	PRINTER OUTPUT
	TAPE1	FILE TO BE LISTED

EXECUTION

FROM BATCH

ATTACH.UTILITY.
LIBRARY.UTILITY.
ATTACH.TAPE1, . . . (FILE TO BE LISTED)
LISTEOI.

FROM TTY

ATTACH.UTILITY.
LIBRARY.UTILITY.
ATTACH.TAPE1, . . . (FILE TO BE LISTED)
LISTEOI.,OUT.
ROUTE.OUT,DC=PR,....

EXECUTE CARD PARAMETERS

LISTEO1,INFILE,OUTPUT,REW,PAGING.

INFILE - INPUT FILE TO BE LISTED

OUTPUT - LISTABLE OUTPUT

REW - INFILE REWIND OPTION

A - REWIND AFTER USE

B - REWIND BEFORE USE

R - REWIND BEFORE AND AFTER USE

U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE

OTHER - NO REWIND (DEFAULT)

(ANY WORDS STARTING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)

PAGING - IF OMITTED OR 'NEWPAG', EACH FILE STARTS
ON A NEW PAGE.

IF ANYTHING ELSE, CONTINUE ON SAME PAGE.

DEFAULT EXECUTE CARD

LISTEO1,TAPE1,OUTPUT,NOREWIND,NEWPAG.

FL NEEDED TO LOAD: 30000B

FL NEEDED TO RUN : 20000B

AUTHOR

DAVID V SOMMER - NSRDC CODE 1892.2

DATE WRITTEN: 05/29/74

DATE(S) REVISED

05/28/75

04/06/76

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LISTN'

PURPOSE

NUMBERED LIST OF ONE FILE OF ZERO-BYTE TERMINATED RECORDS

FUNCTIONAL CATEGORIES: 01

LANGUAGE: PASCAL 6000 RELEASE 3

REMARKS

ONLY ONE FILE IS LISTED. END-OF-RECORD MARKS ARE IGNORED.
THE INPUT FILE IS REWOUND BEFORE AND AFTER USE.

EXECUTION

FROM BATCH

ATTACH,FILE1..... (FILE TO BE LISTED)
ATTACH,UTILITY.
LDSET,LIB=UTILITY. OR LIBRARY,UTILITY.
LISTN.

FROM TTY

ATTACH,FILE1..... (FILE TO BE LISTED)
BEGIN,UTILITY,.LISTN.,OUT.
ROUTE,OUT,DC=PR,.....

EXECUTE CARD PARAMETERS

LISTN,INFILE,OUTPUT/<OPTS>.
INFILE - INPUT FILE TO BE LISTED
OUTPUT - LISTABLE OUTPUT
OPTS - 0 OR MORE OF
D6 - DENSITY IS 6 LINES PER INCH
(DEFAULT: 8 LINES PER INCH)
LN - N IS MAXIMUM LINES TO PRINT
(1 <= N <= 999999; DEFAULT: 10000)
(LIST IS COMMA-SEPARATED WITH NO EMBEDDED
BLANKS)

DEFAULT EXECUTE CARD

LISTN,FILE1,OUTPUT/D8,L10000.

FL NEEDED TO LOAD: 16000B

FL NEEDED TO RUN : 7700B

INPUT/OUTPUT UNITS

LFN	USE
FILE1	INPUT FILE TO BE LISTED (REWOUND BEFORE AND AFTER USE)
OUTPUT	LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED
PART OF LANGUAGE
DATE EOF EOLN LINELIMIT OPTION
RESET TIME
OTHERS
NONE

AUTHOR
DAVID V SOMMER - DTNSDRG CODE 1892.2

DATE WRITTEN: 11/07/78

DATE(S) REVISED
08/02/79 - CONVERT FROM PASCAL 2 TO PASCAL 6000 RELEASE 3
- ADD OPTIONS 'D' AND 'L'
(OPTION 'D' ELIMINATES NEED FOR PROGRAM 'LISTN8')

LOCATION OF DECKS
SOURCE
UPDATE LIBRARY: UTILITYPL.ID=CSYS
OBJECT
EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LISTZ'

PURPOSE

LIST ZERO-BYTE TERMINATED RECORDS WITH RECORD NUMBER AND LENGTHS (USER MAY SPECIFY MAXIMUM NUMBER OF CHARACTERS TO READ (DEFAULT: 140) AND PRINT (DEFAULT: 110))

FUNCTIONAL CATEGORIES: 01

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

NONE

EXECUTION

FROM BATCH

ATTACH,TAPE1,..... FILE TO BE LISTED
BEGIN,UTILITY,,LISTZ.

FROM TTY

ATTACH,TAPE1,..... FILE TO BE LISTED
BEGIN,UTILITY,,LISTZ,,OUT.
ROUTE,OUT,DC=PR,.....

EXECUTE CARD PARAMETERS

LISTZ,INFILE,OUTPUT,REW,LPI,START,INCR,MAXIN,MAXOUT,FLAG.

INFILE - INPUT FILE TO BE LISTED

OUTPUT - LISTABLE OUTPUT

COL 1 - UNIT RECORD NUMBER WITHIN FILE

COL 2 - UNIT RECORD NUMBER WITHIN LOGICAL RECORD

COL 3 - LENGTH OF UNIT RECORD (UP TO MAXIN) (LAST NON-BLANK CHARACTER) (IF MORE THAN MAXIN, AN ASTERISK (*) FOLLOWS THE NUMBER)

COL 4 - FIRST 110 CHARACTERS OF UNIT RECORD (NEXT 110 CHARACTER ARE PRINTED ON NEXT LINE, IF REQUESTED)

REW - INFILE REWIND OPTION

A - REWIND AFTER USE

B - REWIND BEFORE USE

R - REWIND BEFORE AND AFTER USE

U - REWIND BEFORE, REWIND AND UNLOAD AFTER USE

OTHER - NO REWIND (DEFAULT)

(ANY WORDS STARTING WITH THESE LETTERS WILL PRODUCE THE SAME RESULTS)

(IF ABEND, INFILE IS NOT REWOUND)

LPI - LINES PER INCH

6 - 6 LINES PER INCH

ANYTHING ELSE - 8 LINES PER INCH (DEFAULT)

START - STARTING LINE NUMBER (DEFAULT: 1)
 (USE 'E' FOR STANDARD EDITOR SEQUENCING:
 START=100, INCR=10)
 (USE 'U' FOR STANDARD UPDATE SEQUENCING:
 START=2, INCR=1)
 INCR - LINE NUMBER INCREMENT (DEFAULT: 1)
 (IF START=E, INCR=10;
 IF START=U, INCR=1)
 MAXIN - MAXIMUM # OF CHARACTER PER RECORD TO READ
 NNN - SPECIFIC NUMBER (MAXIMUM: 220)
 ALL - 220
 OMITTED - 140
 NON-DIGIT - 140
 (20 ADDITIONAL CHARACTERS ARE READ SO THAT
 LONG RECORDS CAN BE FLAGGED)
 MAXOUT - MAXIMUM # OF CHARACTERS TO PRINT
 NNN - SPECIFIC NUMBER (MAXIMUM: MAXIN)
 ALL - MAXIN
 OMITTED - 110 (1 PRINT LINE)
 NON-DIGIT - 140
 FLAG - FLAG RECORDS LONGER THAN THIS WITH AN *
 NNN - SPECIFIC LINE LENGTH (MAX: MAXIN)
 MAXIN - MAXIN
 MAXOUT - MAXOUT
 OMITTED - 140
 INVALID - MAXIN

DEFAULT EXECUTE CARD

LISTZ,TAPE1,OUTPUT,NOREW,8,1,1,140,110,140.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 32000B
 FL NEEDED TO RUN : 21000B

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
-----	-----	-----
	OUTPUT	LISTABLE OUTPUT
	TAPE1	INPUT FILE TO BE LISTED

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	DATE	FILESQ	GET	IFETCH
MAXO	OPENM	RECOVR	REMARK	TIME

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

CHFILL - CHARACTER FILL
 GETLFNS - GET ACTUAL LOCAL FILE NAMES
 IFMTV - FAST I-FORMAT DECODE
 LASTCH - FIND LAST NON-BLANK CHARACTER IN ARRAY
 SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

L61FMT - FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 04/12/76

DATE(S) REVISED

06/11/76 - ADD LINES PER INCH OPTION
07/29/76 - ADD START AND INCREMENT OPTIONS
09/30/76 - ADD RECORD LENGTH TO PRINTOUT
12/14/76 - PROCESS TO EOI
02/04/77 - ADD START=E, START=U
02/22/77 - INCREASE LINE LENGTH TO 13
05/06/77 - ADD DAYFILE MESSAGE WITH # LINES AND LONGEST LINE
02/23/78 - ADD NEW COLUMN 2 WITH RECORD NUMBER WITHIN
LOGICAL RECORD
05/02/78 - INCREASE RECORD NUMBER FIELD TO 14
06/07/78 - INCREASE RECORD NUMBER FIELD TO 15
- INCREASE MAXIMUM RECORD LENGTH LISTED TO 200
11/06/78 - FIX EOR/EOF LINES
07/23/79 - INCREASE MAXIMUM RECORD LENGTH TO 220
- ADD 'MAXIN', 'MAXOUT', 'FLAG' PARAMETERS
- FLAG LONG RECORDS WITH * NEXT TO RECORD LENGTH

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LIST1'

PURPOSE

LIST (CENTERED) ONE COPY OF CARDS (UP TO 90 CHARACTERS)
HAVING CARRIAGE CONTROL IN COLUMN 1. OPTIONALLY PRINT CARD,
PAGE AND LINE COUNTS AND LINE LENGTHS.

FUNCTIONAL CATEGORIES: 01

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

WHEN LINES PARAMETER OMITTED, LIST1 WILL LIST THE FORM
CENTERED ON WIDE PAPER.

WHEN LINES PARAMETER SPECIFIED, IN ADDITION TO PRINTING THE
FORM, THE CARD NUMBER, PAGE NUMBER OF THE FORM, AND LINE
NUMBER ON THE PAGE ARE PRINTED IN FRONT OF THE LINE AND THE
LINE LENGTH (POSITION OF THE LAST NON-BLANK CHARACTER) IS
PRINTED AFTER EACH LINE. LINES LONGER THAN A SPECIFIED
LENGTH MAY BE FLAGGED.

EXECUTION

FROM BATCH

```
BEGIN,UTILITY,,LIST1,INPUT.  
' 7/8/9 EOR  
(CARDS TO BE LISTED)  
" 6/7/8/9 EOF
```

FROM TTY

```
ATTACH,IN,..... (FILE TO BE LISTED)  
BEGIN,UTILITY,,LIST1,IN,OUT.  
ROUTE,OUT,DC=PR,.....
```

EXECUTE CARD PARAMETERS

LIST1,INFILE,OUTPUT,REW,LINES,START,INCR,FLAG.

```
INFILE - INPUT FILE TO BE LISTED  
OUTPUT - LISTABLE OUTPUT  
REW - INFILE REWIND OPTION  
A - REWIND AFTER USE  
B - REWIND BEFORE USE  
R - REWIND BEFORE AND AFTER USE  
U - REWIND BEFORE, REWIND AND UNLOAD  
AFTER USE  
OTHER - NO REWIND (DEFAULT)  
(ANY WORDS BEGINNING WITH THESE LETTERS WILL  
PRODUCE THE SAME RESULTS)  
LINES - OPTION TO PRINT CARD, PAGE AND LINE COUNTS  
OMITTED OR 'NOLINE' - DO NOT PRINT COUNTS  
ANYTHING ELSE - PRINT COUNTS  
START - STARTING CARD COUNT (WHEN COUNTS PRINTED)  
(DEFAULT: 1)  
INCR - CARD COUNT INCREMENT (WHEN COUNTS PRINTED)  
(DEFAULT: 1)  
FLAG - FLAG LONG LINES (WHEN COUNTS PRINTED)  
OMITTED - FLAG LINES LONGER THAN 72 CHAR  
1-90 - FLAG LINES LONGER THAN THIS  
OTHER - DO NOT FLAG LINES
```

DEFAULT EXECUTE CARD
LIST1,TAPE1,OUTPUT,NOREW,NOLINE,1,1,72.

FL NEEDED TO LOAD: 30000B
FL NEEDED TO RUN : 20000B

DATA CARDS

COL	CONTENTS
1	CARRIAGE CONTROL
1	- NEW PAGE
SPACE	- NEXT LINE
0	- LEAVE 1 BLANK LINE
-	- LEAVE 2 BLANK LINES (NOT FOR 200UT)
+	- PRINT ON SAME LINE
2-90	LINE TO BE PRINTED

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
	OUTPUT	LISTABLE OUTPUT
	TAPE1	INPUT FILE TO BE LISTED
	DAYFILE	NUMBER OF RECORDS AND LONGEST LINE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE				
AND	CLOSEM	FILESQ	GET	IFETCH
MAXO	OPENM	OR	RECOVR	REMARK
PART OF PROGRAM				
EOJ	- ABNORMAL TERMINATION ROUTINE			
OTHERS				
GETLFNS	- GET ACTUAL LOCAL FILE NAMES			
IFMTV	- FAST I-FORMAT DECODE			
LASTC	- FIND LAST NON-BLANK IN ARRAY			
SETREW	- DECODE REWIND OPTION			

ARITHMETIC STATEMENT FUNCTIONS

L11FMT	- FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
R92FMT	- FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

AUTHOR
DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 10/17/73

DATE(S) REVISED

11/16/73

12/07/73

02/03/75

08/28/75

09/02/76 - ADD LINE OPTION

09/07/76 - ADD LINE LENGTH PRINTOUT

05/06/77 - ADD DAYFILE MESSAGE WITH NUMBER OF RECORDS AND
LONGEST LINE

05/24/77 - ADD DAYFILE MESSAGE FOR INPUT FILE EMPTY

11/09/77 - IF CC=+, MOVE LINE LENGTH TO OTHER SIDE OF FLAG

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LIST2'

PURPOSE

SINGLE/DOUBLE SPACE LISTING. 6 OR 8 LINES PER INCH.
WITH OPTIONAL SKIP OVER PERFORATION AT BOTTOM OF PAGE
(FIRST 120 CHARACTERS)

FUNCTIONAL CATEGORIES: 01

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

CONTROL INFORMATION IS PASSED TO PROGRAM VIA EXECUTE
STATEMENT OR FIRST CARD OF INPUT.

EXECUTION

FROM BATCH

ATTACH,UTILITY.
LDSET.LIB=UTILITY.
LIST2.,,<PARAMETERS>.
7/8/9 EOR
(DECK TO BE LISTED)
6/7/8/9 EOF

FROM TTY

ATTACH,FILE,.... (FILE TO BE LISTED)
BEGIN,UTILITY,LIST2,FILE,OUT,<PARAMETERS>.
ROUTE,OUT,DC=PR,....

EXECUTE CARD PARAMETERS

LIST2.INPUT,OUTPUT,SPACING,REW,LPI,PAGING.

INPUT - FILE TO BE LISTED

OUTPUT - LISTABLE OUTPUT

SPACING - SPACING/CONTROL CARD OPTION

0 - CONTROL INFORMATION IS ON FIRST
CARD ON INPUT FILE

2 - DOUBLE SPACING

OTHER - SINGLE SPACING

REW - INPUT REWIND OPTION

A - REWIND AFTER USE

B - REWIND BEFORE USE

R - REWIND BEFORE AND AFTER USE

U - REWIND BEFORE AND REWIND AND
UNLOAD AFTER USE

OTHER - NO REWIND (DEFAULT)

(NOTE: IF INPUT FILE IS 'INPUT' AND/OR
SPACING IS '0', 'NO REWIND' IS FORCED.)

LPI - LINES PER INCH

8 - 8 LINES PER INCH

OTHER - 6 LINES PER INCH (DEFAULT)

PAGING - PAGING OPTION

R - SKIP OVER PERFORATION AT BOTTOM OF
PAGE

OTHER - DO NOT SKIP (DEFAULT)

DEFAULT EXECUTE CARD

LIST2.INPUT,OUTPUT,SINGLE,NOREW.6,SINGLE,NOSKIP.

FL NEEDED TO LOAD: 36000B
FL NEEDED TO RUN : 26000B

DEFAULT PL: 5000 LINES

DATA CARD (IF SPACING=0)

COL	CONTENTS
1	SPACING OPTION
2	- DOUBLE SPACING
	OTHER - SINGLE SPACING
2	LINES PER INCH
8	- 8 LINES PER INCH
	OTHER - 6 LINES PER INCH
3	PAGING OPTION
R	- SKIP OVER PERFORATION AT BOTTOM OF PAGE
	OTHER - DO NOT SKIP

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
	INPUT	FILE TO BE LISTED
	OUTPUT	LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	FILESQ	GET	IFETCH	OPENM
RECOVR	REMARK	SHIFT		

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
LASTC - FIND LAST NON-BLANK
SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODES (LEFT-ADJ, ZERO-FILLED)
L11FMT L12FMT L13FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 08/15/75

DATE(S) REVISED

08/18/75
03/21/77 - GENERAL IMPROVEMENTS

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LIST3'

PURPOSE

LIST FIRST (UP TO 90-CHARACTER, ZERO BYTE TERMINATED) RECORD
IN EACH LOGICAL RECORD THROUGH EOI

FUNCTIONAL CATEGORIES: 01

REMARKS

NONE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	DATE	FILESQ	GET	IFETCH
OPENM	RECOVR	SHIFT	TIME	

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

NONE

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

UNIT	#	LFN	USE
-----	-----	-----	-----
		OUTPUT	LISTABLE OUTPUT
		TAPE1	INPUT FILE TO BE LISTED

EXECUTION

FROM BATCH

ATTACH,UTILITY.
ATTACH,TAPE1,..... (FILE TO BE LISTED)
LDSET,LIB=UTILITY.
LIST3.

FROM TTY

ATTACH,UTILITY.
ATTACH,TAPE1,..... (FILE TO BE LISTED)
LIBRARY,UTILITY.
LIST3,OUT.
ROUTE,OUT,DC=PR,.....

EXECUTE CARD PARAMETERS

LIST3,INFILE,OUTPUT,REW,EOR.

INFILE - INPUT FILE TO BE LISTED

OUTPUT - LISTABLE OUTPUT

REW - INFILE REWIND OPTION

A - REWIND AFTER USE

E - REWIND BEFORE USE

R - REWIND BEFORE AND AFTER USE

(DEFAULT)

U - REWIND BEFORE, REWIND AND UNLOAD

AFTER USE (IF JOB ABENDS, U IS

CHANGED TO R)

OTHER - NO REWIND

(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)

EOR - ONE OF THE FOLLOWING:

OMITTED OR EOR - PRINT EOR/LEVEL NUMBER

AND EOF ON SEPARATE LINE

EOF - PRINT EOR (WITHOUT LEVEL NUMBER) ON

DATA LINE, EOF ON SEPARATE LINE

N OR NO - DO NOT PRINT EOR/EOF INFORMATION

ANYTHING ELSE - PRINT EOR/EOF ON DATA LINE

(NO EOR LEVEL NUMBER)

DEFAULT EXECUTE CARD

LIST3,TAPE1,OUTPUT,REWIND.

FL NEEDED TO LOAD: 26000B

FL NEEDED TO RUN : 17000B

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 11/24/75

DATE(S) REVISED

12/22/75

03/22/76

05/13/76 - INCREASE TO 90 CHARACTERS

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CLIB

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LIST4'

PURPOSE

LIST UNIT RECORDS, THRU EOI, WHICH HAVE '1' IN COLUMN 1

FUNCTIONAL CATEGORIES: 01

REMARKS

NONE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	DATE	FILESQ	GET	IFETCH
OPENM	RECOVR	SHIFT	TIME	

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES

IOPEN - TEST FOR RM FILE OPEN

SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

L11FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
--------	-----	-----

-----	-----	-----
	OUTPUT	LISTABLE OUTPUT
	TAPE1	INPUT FILE TO BE LISTED

EXECUTION

FROM BATCH

ATTACH,UTILITY.

ATTACH,TAPE1..... (FILE TO BE LISTED)

LDSET,LIB=UTILITY.

LIST4.

FROM TTY

ATTACH,UTILITY.

ATTACH,TAPE1..... (FILE TO BE LISTED)

LIBRARY,UTILITY.

LIST4,,OUT.

ROUTE,OUT,DC=PR,.....

EXECUTE CARD PARAMETERS

LIST4,INFILE,OUTPUT,REW.

INFILE - INPUT FILE TO BE LISTED

OUTPUT - LISTABLE OUTPUT

REW - INFILE REWIND OPTION

A - REWIND AFTER USE

B - REWIND BEFORE USE

R - REWIND BEFORE AND AFTER USE

(DEFAULT)

U - REWIND BEFORE, REWIND AND UNLOAD

AFTER USE

OTHER - NO REWIND

(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)

DEFAULT EXECUTE CARD

LIST4,TAPE1,OUTPUT,REWIND.

FL NEEDED TO LOAD: 26000B

FL NEEDED TO RUN : 17000B

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 12/22/75

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CLIB

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'MANUAL'

PURPOSE

EXTRACT REVISION PAGES FROM A MANUAL (CCRM OR CCBRM)

FUNCTIONAL CATEGORIES: SO O1

LANGUAGE: FORTRAN IV EXTENDED

COMPUTER

CDC 6000

REMARKS

THE REVISION NUMBER MUST BE IN COLUMN 22 OF THE TOP-OF-PAGE LINE.

PAGES WITH NO REVISION NUMBER (BLANK IN 22), SUCH AS THE TITLE PAGE, ARE ALWAYS PRINTED.

SPECIFYING REVNO=0 WILL PRINT THE ENTIRE MANUAL, BUT IS NOT EFFICIENT. THE FASTEST WAY IS TO USE COPYE.

EXECUTION

FROM BATCH

ATTACH.IN,.... (MANUAL TO BE PROCESSED)
ATTACH.UTILITY.
LDSET,LIB=UTILITY. -OR- LIBRARY,UTILITY.
MANUAL,*,

FROM TTY

BEGIN,MANUAL,.,<MANUAL-NAME>,<REVNO>,OUT.
ROUTE,OUT,DC=PR,TID=011,FID=*

-OR-

ATTACH.IN,.... (MANUAL TO BE PROCESSED)
BEGIN,UTILITY,.,MANUAL,*,OUT. * IS REVISION NUMBER
ROUTE,OUT,DC=PR,.... (TO NARROW PAPER)

EXECUTE CARD PARAMETERS

MANUAL,INFILE,REVNO,OUTPUT.

INFILE - INPUT FILE CONTAINING THE MANUAL

REVNO - DESIRED REVISION NUMBER (1 DIGIT)

(ALL REVISIONS HIGHER THAN THIS NUMBER ARE
ALSO EXTRACTED)

OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

MANUAL,IN,0,OUTPUT.

(ENTIRE MANUAL. NOT EFFICIENT.
SEE REMARKS.)

DEFAULT PL: 20000 LINES

FL NEEDED TO LOAD: 30000B

FL NEEDED TO RUN : 16000B

ERROR MESSAGES

INPUT FILE EMPTY

THE INPUT FILE CONTAINS NO INFORMATION.

INPUT/OUTPUT UNITS

UNIT # LFN

USE

IN INPUT FILE CONTAINING THE MANUAL
OUTPUT LISTABLE OUTPUT

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND CLOSEM FILESQ GET IFETCH
OPENM PUT

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

L11FMT

FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

R11FMT R12FMT

OTHERS

DIGIT - TEST FOR DIGIT

TOPAGE - TEST FOR TOP-OF-PAGE

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 08/22/79

DATE(S) REVISED

09/28/79 - PUT TOTAL NUMBER OF PAGES PRINTED INTO DAYFILE

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'MANYDOC'

PURPOSE

EXTRACT (PRINT) TWO OR MORE DOCUMENTS FROM A DOCUMENT FILE

FUNCTIONAL CATEGORIES: S0 Q6

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

DOCUMENTS MAY BE REQUESTED IN ANY ORDER BUT WILL BE PRINTED
IN THE ORDER IN WHICH THEY OCCUR IN THE FILE.

DOCUMENTATION FILE IS COMPATIBLE WITH AN UPDATE 'SOURCE'
FILE OF *DECK'S ONLY.

TO EXTRACT ONLY ONE DOCUMENT, USE PROGRAM 'PROGDOC'.

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LIBRARY,UTILITY.

MANYDOC,LIBRARY,ID,,OUTPUT.

' 7/8/9 EOR

(DATA CARDS)

" 6/7/8/9 EOF

FROM TTY

CONNECT,TTY

BEGIN,UTILITY,,MANYDOC,LIBRARY,ID,TTY.OUT,,OUT.

(ENTER DATA CARDS - THERE IS NO PROMPTING)

(END WITH PERCENT EOF)

ROUTE,OUT,DC=PR,....

EXECUTE CARD PARAMETERS

MANYDOC,LIBRARY,ID,INPUT,OUTFILE,LEFT,OUTPUT,DOCFILE.

DECK. (MUST FIT ON ONE CARD)

LIBRARY - FIRST PART OF DOCUMENTATION FILE PFN.

FULL PFN IS LIBRARY DOCUMENTATION.

ID - ID UNDER WHICH DOCUMENTATION IS CATALOGED

(DEFAULT: SYSTEM PUBLIC ACCESS ID)

INPUT - INPUT DATA CARDS

OUTFILE - OUTPUT FILE OF SELECTED DOCUMENTS

(NOT REWOUND)

LEFT - PRINT CENTERING

OMITTED OR 'LEFT' - LEFT-JUSTIFIED ON PAGE

OTHER - CENTERED ON LARGE PAGE

(DEFAULT: LEFT-JUSTIFIED)

OUTPUT - SUMMARY OF REQUESTS

(MAY BE SAME AS OUTFILE)

DOCFILE - IF THE USER HAS PREVIOUSLY ATTACHED A
DOCUMENTATION FILE, PLACE LFN HERE AND OMIT
THE FIRST 2 PARAMETERS ('LIBRARY' AND 'ID').
WHEN THIS PARAMETER IS USED AND IS NOT
'ZZDOC', THE FILE IS NOT RETURNED AT END OF
EXECUTION.

DECK - OMITTED OR NO - NO *DECK CARDS

OTHER - *DECK CARDS COPIED

DEFAULT EXECUTE CARD
MANYDOC,*,*---*,INPUT,TAPE1,LEFT,OUTPUT,ZZDOC,NO.

DEFAULT PL: 15000 LINES

FL NEEDED TO LOAD: 36000B
FL NEEDED TO RUN : 26000B MINIMUM
(PROGRAM ADJUSTS CORE AS REQUIRED)

DATA CARDS

COL	CONTENTS
1-7	NAME OF DESIRED DOCUMENT

ERROR MESSAGES

DOCUMENT FILE EMPTY
FILE WAS FOUND BUT CONTAINED NO INFORMATION

DOCUMENT FILE NOT FOUND
REQUESTED DOCUMENTATION FILE IS NOT IN THE SYSTEM

NO DOCUMENTS FOUND
NONE OF THE REQUESTED DOCUMENTS WAS IN THE FILE

NO DOCUMENTS REQUESTED
NO DATA CARDS WERE ENCOUNTERED

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
INPUT		DATA CARD INPUT FILE
OUTPUT		LISTABLE OUTPUT (SUMMARY OF REQUESTS)
TAPE1		OUTPUT FILE OF SELECTED DOCUMENTS (NOTE: OUTPUT AND TAPE1 MAY BE THE SAME FILE)
ZRECORD		PERMANENT RECORD OF REQUEST (ATTACHED AND RETURNED WITHIN PROGRAM)
ZZDOC		FILE CONTAINING DOCUMENTATION (ATTACHED AND RETURNED WITHIN PROGRAM) (IF USER REPLACES THE FILE NAME AT EXECUTION TIME, THE FILE IS ASSUMED TO BE ATTACHED AND WILL NOT BE RETURNED)

EXAMPLE

PRINT DOCUMENTATION FOR PROGRAMS 'MANYDOC' AND 'PROGDOC':
ATTACH,UTILITY.
LIBRARY,UTILITY.
MANYDOC,UTILITY,...OUTPUT.
' 7/8/9 EOR
MANYDOC
PROGDOC
" 6/7/8/9 EOF

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	DATE	EOF	FILESQ
GET	IFETCH	MOVLEV	OPENM	PUT
RECOVR	REMARK	SHIFT	TIME	

PART OF PROGRAM

CLOSFIL - CLOSE FILES
 COPYDEK - COPY ONE DOCUMENT
 EOJ - ABNORMAL TERMINATION ROUTINE
 FINDECK - LOCATE NEXT *DECK CARD
 GETFIL - ATTACH DOCUMENTATION FILE
 GETIN - READ INPUT DATA CARDS
 RECORD - MAKE PERMANENT RECORD OF REQUESTS

OTHERS

CPU467 - GET CPU PROGRAM IS RUNNING ON
 DVSORTA - SORT ARRAY
 FINDWRD - SEARCH ARRAY FOR WORD
 GETLFNS - GET ACTUAL LOCAL FILE NAMES
 IDID - GET USER ID
 IPAKLFT - SQUEEZE LEFT AND REMOVE BLANKS
 ISUMIT - SUM INTEGER ARRAY
 LASTC - FIND LAST NON-BLANK
 MOVSTR - MOVE CHARACTER STRING
 PUTCHA - INSERT CHARACTER
 REDUCE - ADJUST CORE UP AND DOWN
 REQUEST - CALLABLE REQUEST
 VFILL - FILL ARRAY WITH WORD
 ZPFUNC - CALLABLE PF FUNCTIONS

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ. ZERO-FILLED)
 L11FMT L61FMT L71FMT
 FAST R-FORMAT DECODE (RIGHT-ADJ. ZERO-FILLED)
 R51FMT R56FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 04/28/77

DATE(S) REVISED

05/05/77 - ADD CPU TO PERMANENT RECORD
 02/02/78 - ADD DECK OPTION

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'MTDOC'

PURPOSE

CREATE DOCUMENTATION TO DESCRIBE THE CONTENTS OF A MAGNETIC TAPE

FUNCTIONAL CATEGORIES: Q6

REMARKS

IF ANY QUESTION IS ANSWERED WITH A SINGLE ENTRY OF ? , A LONGER, MORE DETAILED DESCRIPTION OF THE CURRENT ITEM IS TYPED.

IF ANY QUESTION (EXCEPT FOR *DECK CARDS AND UNDERLINE CHARACTER) IS ANSWERED WITH A SINGLE ENTRY OF C , THE CURRENT DOCUMENT IS TERMINATED.

SUBROUTINE AND FUNCTION: SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND CONNEX RECOVR REMARK SHIFT

PART OF PROGRAM

ANYMOR - ASK IF ANY MORE DOCUMENTS TO BE CREATED
CONTACT - ASK FOR PERSON TO CONTACT ABOUT THIS TAPE
DECK1 - ASK IF *DECK CARDS DESIRED
DENS - ASK FOR TAPE DENSITY INFORMATION
ECHO1 - ASK IF ECHO DESIRED
ENDIT - CLOSE PROGRAM AND PRINT SUMMARY
EOJ - ABNORMAL TERMINATION ROUTINE
GET13 - GET VARIABLE LENGTH INFO AND PRINT IN COL 13
LABL - ASK FOR TAPE LABEL
PRMPT - ASK IF LONG/SHORT PROMPTING DESIRED
REM - ASK FOR ANY REMARKS
RETENT - ASK FOR RETENTION PERIOD
TAPLOC - ASK FOR TAPE LOCATION (6700 ROOM, ETC)
TAPNO - ASK FOR TAPE NUMBER (CA9999, ETC)
TCREATE - ASK FOR CREATION DATE
TDESCR - ASK FOR DESCRIPTION OF TAPE CONTENTS
TRUNC - PRINT TRUNCATED MESSAGE
UNDER1 - ASK WHICH UNDERLINE CHARACTER DESIRED

OTHERS

ELTIME - TIMING ROUTINE
FSETFIT - SET FIT VALUES
GETLFNS - GET ACTUAL LOCAL FILE NAMES
IFMTV - FAST VARIABLE LENGTH I-FORMAT DECODE
JULIAN - GREGORIAN/JULIAN DATE CONVERTER (SINGLE-YEAR)
PAKLFT - SQUEEZE LEFT AND REMOVE BLANKS AND 00B
REQUEST - REQUEST,DOCMNT,*PF.
TRAILBZ - CHANGE TRAILING BLANKS TO 00B

ARITHMETIC STATEMENT FUNCTIONS

FAST I-FORMAT DECODE

I11FMT

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

L11FMT L14FMT L22FMT L25FMT L61FMT

FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

R13FMT R56FMT

LANGUAGE: FORTRAN IV

METHOD

TTY IS PROMPTED FOR EACH SECTION OF THE DOCUMENT.

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
1	ZZTTY1	TTY INPUT
4	DOCMNT	CREATED DOCUMENTS (ON PF SPACE)
5	ZZTTYO	TTY PROMPTER
	OUTPUT	FTN ERROR MESSAGES

EXECUTION

FROM BATCH

NOT DESIGNED FOR BATCH USE

FROM TTY

BEGIN,UTILITY,,MTDOC.

(TTY IS PROMPTED FOR ALL INPUT)

CATALOG,DOCMNT,.... AND/OR MODIFY USING EDITOR

EXECUTE CARD PARAMETERS

MTDOC,DOCMNT,QUICK.

DOCMNT - CREATED DOCUMENT(S)
(MAY BE CATALOGED)

QUICK - 'Q' - DO NOT PRINT INITIAL DESCRIPTION:
GIVE SHORT PROMPT FOR FIRST
QUESTIONS

OTHER - PRINT INITIAL DESCRIPTION AND LONG
PROMPTING FOR FIRST QUESTIONS

NOTE: OMIT UNTIL YOU ARE USED TO THE
PROGRAM, THEN USE Q.

DEFAULT EXECUTE CARD

MTDOC,DOCMNT.

FL NEEDED TO LOAD: 35000B

FL NEEDED TO RUN : 25000B

DATA

THE FOLLOWING INFORMATION IS REQUESTED ONCE PER EXECUTION:

- 1 - DO YOU WANT UPDATE *DECK CARDS GENERATED BEFORE EACH DOCUMENT? ENTER Y FOR YES, N FOR NO.
- 2 - WHICH UNDERLINE CHARACTER DO YOU WANT?
ENTER 1 FOR UNDERSCORE (_) OR 2 FOR HYPHEN (-).

THE FOLLOWING INFORMATION IS REQUESTED FOR EACH DOCUMENT:

- 3 - DO YOU WANT ALL ENTRIES ECHOED? (Y FOR YES, N FOR NO)
- 4 - DO YOU WANT THE LONG OR SHORT FORM OF THE PROMPTING MESSAGES? ENTER L FOR LONG, S FOR SHORT.
- 5 - TAPE NUMBER (1-6 CHARACTERS) (E.G., CA9999)
- 6 - TAPE LABEL (4-7 CHARACTERS; BLANK FOR UNLABELLED)
- 7 - DENSITY INFORMATION (6 CHARACTERS, AS FOLLOWS)
 - 1 - 7 (FOR 7-TRACK) OR 9 (FOR 9-TRACK)
 - 2-3 - DENSITY (LO, HI, HY, HD)
 - 4 - S/L/BLANK (FOR STRANGER/LONG/SCOPE)
 - 5-6 - EB/BLANK (EB ON 9-TRACK ONLY)
(DEFAULT: '7HY')
- 8 - LOCATION OF TAPE
4/6/7 FOR 6400/6600/6700 ROOM OR
DESCRIBE THE LOCATION (1-53 CHARACTERS)
- 9 - CREATION DATE (WHEN LABEL WAS WRITTEN; MAY BE YYDDD
OR MM/DD/YY)
- 10 - RETENTION PERIOD AS SPECIFIED ON LABEL CARD! (1-999
DAYS OR BLANK (7 DAYS) (LEFT-JUSTIFIED))
- 11 - NAME OF PERSON RESPONSIBLE FOR CONTENTS OF TAPE
ANY NUMBER OF 1- TO 60-CHARACTER LINES. END WITH A
SINGLE ENTRY OF SEMI-COLON (:).
- 12 - REMARKS. USE THIS SECTION FOR ANY REMARKS ABOUT THE
TAPE OR ITS CONTENTS. YOU MAY WANT TO GIVE THE TAPE
HISTORY. NOTE: TAPE CONTENTS IS ENTERED IN RESPONSE
TO THE NEXT QUESTION. ANY NUMBER OF 1- TO
60-CHARACTER LINES. END WITH A SINGLE ENTRY OF
SEMI-COLON (:).
- 13 - TAPE CONTENTS. ANY NUMBER OF 1- TO 60-CHARACTER
LINES. END WITH A SINGLE ENTRY OF SEMI-COLON (:).
HEADINGS ARE PROVIDED FOR FILE NUMBER, RECORD NUMBER
AND CONTENTS OF THE RECORD.
- 14 - END OF DOCUMENT. DO YOU WANT TO DO ANOTHER?
(Y FOR YES, N FOR NO)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 06/18/76

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'NEWNAME'

PURPOSE

RENAME A SIMPLE ABSOLUTE MODULE

FUNCTIONAL CATEGORIES: K3

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

AT PRESENT, THIS PROGRAM WILL HANDLE ONLY THE FOLLOWING
TYPES OF OBJECT MODULES:

- 1) SIMPLE (NON-OVERLAY, NON-SEGLOAD) ABSOLUTE
(CREATED BY NOGO, ABSLFN)

ONLY THE FIRST LOGICAL RECORD IS PROCESSED.

RESULTS ARE NOT PREDICTED WHEN USED ON RELOCATABLE MODULES
OR OTHER TYPES OF ABSOLUTES.

EXECUTION

FROM BATCH AND TTY

ATTACH,TAPE1,... (ABSOLUTE MODULE TO BE RENAMED)
BEGIN,UTILITY,,NEWNAME,... * IS NEW NAME
(TAPE2 HAS THE RENAMED MODULE)

EXECUTE CARD PARAMETERS

NEWNAME,INFILE,OUTFILE,NAME,OUTPUT.
INFILE - INPUT FILE CONTAINING MODULE TO BE RENAMED
OUTFILE - OUTPUT FILE CONTAINING RENAMED MODULE
NAME - NEW NAME (ANYTHING EXCEPT 'ZYXWVU')
OUTPUT - LISTABLE OUTPUT (FTN ERROR MESSAGES)

DEFAULT EXECUTE CARD

NEWNAME,TAPE1,TAPE2,*,OUTPUT.
(* - USER MUST SUPPLY)

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 21000B

DAYFILE MESSAGES

INPUT FILE EMPTY

INPUT FILE CONTAINS NO INFORMATION

INPUT NOT BINARY MODULE

INPUT DOES NOT BEGIN WITH 7700 TABLE. PROBABLY A SOURCE
OR DATA FILE.

PARAM 3 (NEW NAME) OMITTED

USER DID NOT SPECIFY A NEW NAME

UNEXPECTED EOI ENCOUNTERED
EOI ENCOUNTERED BEFORE EOR - SHOULD NEVER OCCUR

XXXXXXX CHANGED TO ZZZZZZZ
NNNNN PRU(S) COPIED
SUMMARY OF PROCESSING

INPUT/OUTPUT UNITS
UNIT # LFN

USE

TAPE1	INPUT FILE CONTAINING MODULE TO BE RENAMED (REWOUND BEFORE AND AFTER USE)
TAPE2	OUTPUT FILE CONTAINING RENAMED MODULE (REWOUND BEFORE AND AFTER USE)
DAYFILE	MESSAGES

METHOD

WORD TABLE+1 OF THE PREFIX TABLE (7700) IS CHANGED.
(IF THERE IS A 54 TABLE, THE FIRST ENTRY NAME IS CHANGED IN
WORD TABLE+8). WORD TABLE+10 MAY ALSO BE CHANGED.
IF NO 7700 TABLE, NOT AN OBJECT MODULE.
IF NOT ABSOLUTE MODULE, RESULTS ARE UNPREDICTABLE.
ONLY FIRST LOGICAL RECORD IS PROCESSED.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	FILESQ	GET	IFETCH
OPENM	PUT	RECOVR	REMARK	WEOR

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
REPLAC - REPLACE ONE CHARACTER WITH ANOTHER

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L31FMT L71FMT L81FMT
FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO FILLED)
R21FMT R38FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 05/10/77

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'PAGEPRT'

PURPOSE

PRINT SELECTED PAGE(S) FROM A DOCUMENT

FUNCTIONAL CATEGORIES: S0 01

REMARKS

IF MORE THAN ONE PAGE REQUESTED, THEY MUST BE IN ORDER,
AS THE DOCUMENT FILE IS SEARCHED ONLY ONCE.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM EOF FILESQ GET IFETCH

OPENM RECOVR REMARK SHIFT

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES

IOPEN - TEST FOR RM FILE OPEN

REPLAC - REPLACE ONE CHARACTER WITH ANOTHER

SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

A105FMT - FAST A-FORMAT DECODE

L11FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

L71FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

LANGUAGE: FORTRAN IV

METHOD

HEADER LINES ('1' IN COLUMN ONE) ARE SEARCHED FOR
'PAGE' IN COLUMNS 60-63. THE PAGE NUMBER MUST BE IN
COLUMNS 65-74. LINES ARE COPIED UNTIL A NEW HEADER
LINE IS ENCOUNTERED.

END-OF-RECORD IS IGNORED; END-OF-FILE OR END-OF-INFORMATION
WILL END THE PROGRAM.

INPUT/OUTPUT UNITS

UNIT	#	LFN	USE
------	---	-----	-----

5		INPUT	OPTIONAL DATA CARDS
		CCRM	INPUT DOCUMENT FILE
		OUTPUT	LISTABLE OUTPUT

EXECUTION

FROM BATCH

ATTACH,UTILITY.

ATTACH,TAPE1,..... (DOCUMENT FILE)

LDSET,LIB=UTILITY.

PAGEPRT,.....

7/8/9

(DATA CARDS. IF NONE, NO 7/8/9 IS REQUIRED)

6/7/8/9

FROM TTY

ATTACH,TAPE1,..... (DOCUMENT FILE)
ATTACH,UTILITY.
LIBRARY,UTILITY.
PAGEPRT,TAPE1,0,OUT,R,\$1-14\$. (PRINT PAGE 1-14)
ROUTE,OUT,DC=PR,.....

--OR--

ATTACH,TAPE1,..... (DOCUMENT FILE)
ATTACH,UTILITY.
LIBRARY,UTILITY.
CONNECT,INPUT.
PAGEPRT,TAPE1,0,OUT.
(ENTER PAGE NUMBERS, ONE AT A TIME, END WITH
PERCENT EOF)
ROUTE,OUT,DC=PR,.....

EXECUTE CARD PARAMETERS

PAGEPRT,INFILE,ID,OUTPUT,REW,PAGE,INPUT.

INFILE - INPUT DOCUMENT FILE

ONE OF:

- .1-7 CHARACTER PFN OF DOCUMENT FILE TO BE ATTACHED BY PROGRAM;
- .1-7 CHARACTER LFN OF ALREADY ATTACHED FILE;
- .OMITTED FOR COMPUTER CENTER REFERENCE MANUAL.

ID - ONE OF:

- .ID OF DOCUMENT FILE TO BE ATTACHED BY PROGRAM;
- .0. IF DOCUMENT FILE ALREADY ATTACHED;
- .OMITTED FOR COMPUTER CENTER REFERENCE MANUAL, OR ANY OTHER FILE WITH SYSTEM PUBLIC ACCESS ID.

OUTPUT - LISTABLE OUTPUT

REW - INFILE REWIND OPTION

- A - REWIND AFTER USE
- B - REWIND BEFORE USE
- R - REWIND BEFORE AND AFTER USE (DEFAULT)
- U - REWIND BEFORE, REWIND AND UNLOAD AFTER USE (FORCED IF BOTH INFILE AND ID OMITTED)

OTHER - NO REWIND

(ANY WORDS BEGINNING WITH THESE LETTERS WILL PRODUCE THE SAME RESULTS)

PAGE - IF OMITTED, PAGE NUMBERS READ FROM FILE INPUT.

IF SPECIFIED, THIS IS A 1-7 CHARACTER PAGE NUMBER (ENCLOSE IN \$ IF ANY SPECIAL CHARACTERS).

INPUT - DATA CARD INPUT FILE. USED ONLY IF PAGE PARAMETER OMITTED.

DEFAULT EXECUTE CARD

PAGEPRT,*,**,OUTPUT,REWIND,,INPUT.

* - COMPUTER CENTER REFERENCE MANUAL

** - SYSTEM PUBLIC ACCESS ID

FL NEEDED TO LOAD: 32000B

FL NEEDED TO RUN : 23000B

DATA CARDS (ONLY IF PAGE PARAMETER OMITTED)

COL	CONTENTS
-----	----------

-----	-----
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1-10	PAGE NUMBER
------	-------------

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 02/09/76

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'PFDOC'

PURPOSE

CREATE PERMANENT FILE DOCUMENTATION

FUNCTIONAL CATEGORIES: Q6

REMARKS

IF ANY QUESTION IS ANSWERED WITH A SINGLE ENTRY OF ? , A LONG(ER), MORE DETAILED DESCRIPTION OF THE CURRENT ITEM IS TYPED.

IF ANY QUESTION (EXCEPT FOR *DECK CARDS AND UNDERLINE CHARACTER) IS ANSWERED WITH A SINGLE ENTRY OF @ , THE CURRENT DOCUMENT IS TERMINATED.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CONNEC	DATE	EOF	MINO
MOVLEV	OR	RECOVR	REMARK	SHIFT

PART OF PROGRAM

AC	-	ASK FOR ACCOUNT NUMBER (AC)
ANYMOR	-	ASK IF ANY MORE DOCUMENTS TO BE CREATED
BACKUP	-	ASK WHERE BACKUPS ARE
CY	-	ASK FOR CYCLE
DATES	-	ASK FOR DATE CREATED, BY WHOM AND WHEN REVISED
DECK1	-	ASK IF *DECK CARDS DESIRED
DESCR	-	ASK FOR DESCRIPTION OF THE PERMANENT FILE
ECHO1	-	ASK IF ECHO DESIRED
ENDIT	-	CLOSE PROGRAM AND PRINT SUMMARY
EOJ	-	ABNORMAL TERMINATION ROUTINE
FMT	-	ASK FOR FILE FORMAT
GETPFN	-	ASK FOR PERMANENT FILE NAME
GET14	-	GET VARIABLE LENGTH INFO AND PRINT IN COL 14
GET18	-	GET VARIABLE LENGTH INFO AND PRINT IN COL 18 (ENTRY IN GET14)
GET29	-	GET VARIABLE LENGTH INFO AND PRINT IN COL 29 (ENTRY IN GET14)
ID	-	ASK FOR ID FILE IS CATALOGED UNDER
PASS	-	ASK FOR PASSWORDS
PRMPT	-	ASK IF LONG/SHORT PROMPTING DESIRED
TRUNC	-	PRINT TRUNCATED MESSAGE
UNDER1	-	ASK WHICH UNDERLINE CHARACTER DESIRED
WHERE	-	ASK WHERE WRITEUP AND LISTING ARE

OTHERS

ELTIME	-	TIMING ROUTINE
FINDWRD	-	SEE IF WORD IN IN ARRAY
FSETFIT	-	SET FTN FIT VALUES
GETLFNS	-	GET ACTUAL LOCAL FILE NAMES
REPLAC	-	REPLACE ONE CHARACTER WITH ANOTHER
UNLOAD	-	RETURN FILES
ZBLANK	-	CHANGE BLANKS TO 00B AND VICE VERSA

ARITHMETIC STATEMENT FUNCTIONS

R110FMT - FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

LANGUAGE: FORTRAN IV

METHOD

TTY IS PROMPTED FOR EACH SECTION OF THE DOCUMENT.

ALL SECTIONS ARE ALWAYS ASKED FOR EXCEPT THAT WHEN AN XR
PASSWORD IS GIVEN, THE CN, EX, MD PASSWORDS ARE NOT
REQUESTED.

INPUT/OUTPUT UNITS

UNIT	#	LFN	USE
1		ZZTTYI	TTY INPUT
4		DOCMNT	CREATED DOCUMENTS (ON PF SPACE)
5		ZZTTYO	TTY PROMPTER
		OUTPUT	FTN ERROR MESSAGES

EXECUTION

FROM BATCH

NOT DESIGNED FOR BATCH USE

FROM TTY

BEGIN,UTILITY,,PFDOC.

(TTY IS PROMPTED FOR ALL INPUT)

CATALOG,DOCMNT,..... AND/OR MODIFY USING EDITOR

EXECUTE CARD PARAMETERS

PFDOC,DOCMNT,QUICK.

DOCMNT - CREATED DOCUMENT(S)
(MAY BE CATALOGED)

QUICK - 'Q' - DO NOT PRINT INITIAL DESCRIPTION:
GIVE SHORT PROMPT FOR FIRST
QUESTIONS

OTHER - PRINT INITIAL DESCRIPTION AND LONG
PROMPTING FOR FIRST QUESTIONS

NOTE: OMIT UNTIL YOU ARE USED TO THE
PROGRAM, THEN USE Q.

DEFAULT EXECUTE CARD

PFDOC,DOCMNT.

FL NEEDED TO LOAD: 37000B

FL NEEDED TO RUN : 30000B

DATA

THE FOLLOWING INFORMATION IS REQUESTED ONCE PER EXECUTION:

- 1 - DO YOU WANT UPDATE *DECK CARDS GENERATED BEFORE EACH DOCUMENT? ENTER Y FOR YES, N FOR NO.
(THE DECK NAME WILL BE THE FIRST 7 CHRACTERS OF THE PFN)
- 2 - WHICH UNDERLINE CHARACTER DO YOU WANT?
ENTER 1 FOR UNDERSCORE (_) OR 2 FOR HYPHEN (-).

THE FOLLOWING INFORMATION IS REQUESTED FOR EACH DOCUMENT:

- 3 - DO YOU WANT ALL ENTRIES ECHOED? (Y FOR YES, N FOR NO)
- 4 - DO YOU WANT THE LONG OR SHORT FORM OF THE PROMPTING MESSAGES? ENTER L FOR LONG, S FOR SHORT.
- 5 - PFN (1-40 CHARACTERS)
- 6 - ID (1-9 CHARACTERS)
- 7 - AC (10 CHARACTERS)
- 8 - CY (1-3 DIGITS)
- 9 - TURNKEY PASSWORD (TK) (1-9 CHARACTERS)
- 10 - READ PASSWORD (RD) (1-9 CHARACTERS)
- 11 - READ ONLY (XR) PASSWORD (1-9 CHARACTERS)
IF XR IS BLANK, ASK FOR THE NEXT 3 PASSWORDS
- 12 - CONTROL PASSWRD (CN) (1-9 CHARACTERS)
- 13 - EXTEND PASSWORD (EX) (1-9 CHARACTERS)
- 14 - MODIFY PASSWORD (MD) (1-9 CHARACTERS)
- 15 - SPECIAL PASSWORD (1-9 CHARACTERS)
(REQUESTED ONLY IF ID IS PPUBLIC ACCESS ID)
- 16 - FILE FORMAT. THERE ARE 12 RECOGNIZED ABBREVIATIONS AND PROVISION FOR USER-SPECIFIED DESCRIPTION.
TO FIND CURRENT LIST, ANSWER ? TO THIS QUESTION.
- 17 - DATE FILE CREATED. ENTER MM/DD/YY OR ENTER SEMI-COLON (:) FOR TODAY.
- 18 - NAME OF PERSON WHO CREATED THE FILE
(1-30 CHARACTERS)
- 19 - DATES THE FILE WAS REVISED (EXTENDED OR MODIFIED).
ANY NUMBER OF 1-55 CHARACTER LINES. END WITH A SINGLE ENTRY OF SEMI-COLON (:).
- 20 - WHERE IS THE WRITEUP LOCATED?
ANY NUMBER OF 1-44 CHARACTER LINES. END WITH A SINGLE ENTRY OF SEMI-COLON (:).
- 21 - WHERE IS THE LISTING LOCATED?
ANY NUMBER OF 1-44 CHARACTER LINES. END WITH A SINGLE ENTRY OF SEMI-COLON (:).
- 22 - WHAT BACKUP IS THERE FOR THE FILE AND WHERE IS IT?
ANY NUMBER OF 1-59 CHARACTER LINES. END WITH A SINGLE ENTRY OF SEMI-COLON (:).
- 23 - GIVE A DESCRIPTION OF THE FILE.
ANY NUMBER OF 1-59 CHARACTER LINES. END WITH A SINGLE ENTRY OF SEMI-COLON (:).
- 24 - END OF DOCUMENT. DO YOU WANT TO DO ANOTHER?
(Y FOR YES, N FOR NO)

AUTHOR
DAVID V SOMMER - DTNSRDC CODE 1892.2

DATA WRITTEN: 12/04/73 (ORIGINALLY CALLED 'SDOC')

DATE(S) REVISED

12/12/73

01/09/74

01/15/76 (NAME CHANGED TO 'PFDOC')

07/07/76 - 1) CHANGE TERMINATE CHARACTER TO @.

2) ADD QUICK OPTION.

3) REMOVE CENTERED LISTABLE OUTPUT.

4) ADD 'D' (DOCUMENTATION FILE) TO TYPES OF FILE FORMATS.

5) REMOVE ABILITY TO LIST FINAL DOCUMENT(S) AT TTY.

6) ADD RESPONSE LENGTHS TO PROMPTING MESSAGES.

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'PROGDOC'

PURPOSE

EXTRACT (PRINT) ONE OR ALL DOCUMENT(S) FROM A DOCUMENT FILE

FUNCTIONAL CATEGORIES: Q6 S0

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

DOCUMENT FILE IS COMPATIBLE WITH AN UPDATE 'SOURCE' FILE
OF *DECK'S ONLY.

EXECUTION

FROM BATCH

ATTACH,UTILITY.
LDSET,LIB=UTILITY.
PROGDOC,LIBRARY,ID,PROGNAME.

FROM TTY

BEGIN,UTILITY,,PROGDOC,LIBRARY,ID,PROGNAME,OUT.
DISPOSE,OUT,PR=XXX.

EXECUTE CARD PARAMETERS

PROGDOC,LIBRARY,ID,ROUTINE,OUTPUT,LEFT,DOCFILE,DECK.

LIBRARY - NAME OF LIBRARY CONTAINING ROUTINE FOR WHICH
DOCUMENTATION IS DESIRED
MAY BE ONE OF:

NSRDC

UTILITY (DEFAULT)

ANY OTHER LIBRARY NAME (1-7 CHAR)

PROGRAM WILL ATTACH AND RETURN THE
DOCUMENTATION FILE. THE PFN USED WILL BE
THE LIBRARY NAME SPECIFIED, FOLLOWED BY
'DOCUMENTATION' (DEFAULT IS
'UTILITYDOCUMENTATION')

ID - ID UNDER WHICH DOCUMENTATION IS CATALOGED
(DEFAULT IS THE SYSTEM PUBLIC ACCESS ID)

ROUTINE - NAME OF ROUTINE FOR WHICH DOCUMENTATION
IS DESIRED
('ALL' TO PRINT ALL DOCUMENTATION)
(DEFAULT IS 'NONE')

OUTPUT - LISTABLE OUTPUT

LEFT - PRINT CENTERING

MISSING OR 'LEFT' - LEFT-JUSTIFIED ON PAGE
OTHER - CENTERED ON LARGE PAGE
(DEFAULT IS LEFT-JUSTIFIED)

DOCFILE - IF USER HAS PREVIOUSLY ATTACHED A
DOCUMENTATION FILE, PLACE LFN HERE AND OMIT
THE FIRST 2 PARAMETERS ('LIBRARY' AND 'ID').
WHEN THIS PARAMETER IS USED AND IS NOT
'ZZDOC', THE FILE IS NOT RETURNED AT END OF
EXECUTION.

DECK - OMITTED OR NO - NO *DECK CARDS
OTHER - OUTPUT *DECK CARDS

DEFAULT EXECUTE CARD
PROGDOC,UTILITY,*---*,NONE,OUTPUT,LEFT,TAPE1,ZZDOC.

DEFAULT PL: 50000 LINES

FL NEEDED TO LOAD: 32000B
FL NEEDED TO RUN : 22000B

FORMAT OF THE DOCUMENTATION FILE
THE FIRST RECORD OF EACH DOCUMENT IDENTIFIES IT

COL	CONTENTS
1-5	*DECK
6	BLANK
7-13	DOCUMENT NAME (1-7 CHARACTERS, NO EMBEDDED BLANKS OR SPECIAL CHARACTERS)

EACH DOCUMENT IS COMPOSED OF RECORDS OF THE FOLLOWING FORM:

COL	CONTENTS
1	CARRIAGE CONTROL
2-80	LINE OF DOCUMENT

ERROR MESSAGES

ABEND
JOB ABORTED

DOCUMENT FILE NOT FOUND
REQUESTED FILE <LIB>_DOCUMENTATION.ID=<ID> NOT IN SYSTEM

<DOCUMNT> NOT FOUND
REQUESTED DOCUMENT IS NOT IN THE FILE

ERROR TRYING TO ATTACH
DOCUMENT FILE - RETURN CODE IS <RC>B
CONTACT USER SERVICES

FILE ALREADY ATTACHED
REQUESTED DOCUMENT FILE IS ALREADY ATTACHED

FILE UNAVAILABLE
CANNOT ATTACH REQUESTED DOCUMENT FILE

LFN ALREADY IN USE
RETURN,ZZDOC. AND TRY AGAIN

NO DOCUMENT REQUESTED
THIRD EXECUTE CARD PARAMETER WAS NOT SPECIFIED

INPUT/OUTPUT UNITS

UNIT # LFN

USE

```

-----
          OUTPUT  LISTABLE OUTPUT
          ZRECORD  PERMANENT RECORD OF REQUEST
                   (ATTACHED AND RETURNED WITHIN PROGRAM)
          ZZDOC    FILE CONTAINING DOCUMENTATION
                   (ATTACHED AND RETURNED WITHIN PROGRAM)
                   (IF THE USER REPLACES THE FILE NAME AT
                   EXECUTION TIME, THE FILE IS ASSUMED TO
                   BE ATTACHED AND WILL NOT BE RETURNED)
  
```

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	DATE	FILESQ	GET
IFETCH	OPENM	OR	PUT	RECOVR
REMARK	SHIFT	STOKEF	TIME	

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE
 RECORD - WRITE PERMANENT RECORD OF REQUEST

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
 IDID - GET USER ID
 IPAKLFT - SQUEEZE BLANKS AND ZEROS OUT OF PFN
 LASTC - FIND LAST NON-BLANK/NON-OOB CHARACTER
 MFX - GET MACHINE PROGRAM IS RUNNING ON
 MOVSTR - MOVE CHARACTER STRING
 REPLAC - REPLACE ONE CHARACTER WITH ANOTHER
 REQUEST - REQUEST,ZRECORD,*PF.
 UNLOAD - RETURN,TAPE1.
 ZPFUNC - ATTACH DOCUMENTATION FILE

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
 L11FMT L61FMT L77FMT
 FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)
 R92FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 01/27/75

DATE(S) REVISED

03/26/75
 02/07/77 - CHANGE TO RECORD MANAGER; IMPROVE ERROR MESSAGE
 03/31/77 - ADD AND SET PERMANENT RECORD FLAG
 05/05/77 - ADD CPU TO PERMANENT RECORD
 02/03/78 - ADD DECK OPTION
 05/18/79 - INCREASE DEFAULT PL TO 50000

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'PROMNT'

PURPOSE

MAINTAIN AN ALPHABETICAL, SEQUENTIAL PROCEDURE FILE, EACH
PROCEDURE BEING ONE NOS/BE LOGICAL RECORD. BOTH CCL AND B/R
PROCEDURES ARE SUPPORTED.

FUNCTIONAL CATEGORIES: Q4 S0 K1

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

EACH PROCEDURE MUST BE ONE AND ONLY ONE LOGICAL RECORD.
EMPTY RECORDS WILL BE FLAGGED IN THE LISTINGS (FCN= H, L, N,
Q) AND REMOVED (WITH COUNT IN DAYFILE) IN MAINTENANCE (FCN=
A, D, R).

EXECUTION

FROM BATCH

ATTACH.TAPE1,.... (INPUT PROCEDURE FILE)
BEGIN,UTILITY,,PROMNT,....

FROM TTY

ATTACH.TAPE1,.... (INPUT PROCEDURE FILE)
BEGIN,UTILITY,,PROMNT,.....OUT.
ROUTE,OUT,DC=PR,....

EXECUTE CARD PARAMETERS

PROMNT,INFILE,OUTFILE,FCN,NAME,ID,OUTPUT.

INFILE - INPUT PROCEDURE FILE

OUTFILE - OUTPUT PROCEDURE FILE
(FOR FCN: A, D, G, R)

FCN - FUNCTION. ONE OF:

A OR ADD - ADD PROCEDURE 'NAME'
D OR DELETE - DELETE PROCEDURE 'NAME'
G OR GET - EXTRACT PROCEDURE 'NAME'
AND PUT ON 'OUTFILE'

H OR HEADERS - LIST PROCEDURE HEADERS
L OR LIST - LIST ALL PROCEDURES (OR
PROCEDURE 'NAME') EACH
STARTING ON A NEW PAGE

N OR NAMES - LIST PROCEDURE NAMES
Q - QUICK LIST OF PROCEDURE NAMES
(NO HEADINGS, SINGLE COLUMN)

R OR REPLACE - REPLACE PROCEDURE 'NAME'

NAME - ONE OF:

PROCEDURE NAME

(FOR FCN: G, L: IF OMITTED, ALL)

FILE CONTAINING NEW PROCEDURE

(FOR FCN: A, D, R)

ID - OPTIONAL ID FOR FCN: H, L, N.

IF SPECIFIED - HEADING HAS ID = XXXX.

IF OMITTED - HEADING HAS LFN: INFILE.

OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

PROMNT,TAPE1,TAPE2,*,ALL,OUTPUT.

* - USER MUST SPECIFY

FL NEEDED TO LOAD: 36000B
 FL NEEDED TO RUN : 26000B
 (PROGRAM ADJUSTS CORE AS REQUIRED)

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
4	ALL	NEW PROCEDURE INPUT FILE
	OUTPUT	LISTABLE OUTPUT
1	TAPE1	INPUT PROCEDURE FILE
2	TAPE2	OUTPUT PROCEDURE FILE
	DAYFILE	MESSAGE(S) ON WHAT WAS DONE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	BUFFERIN	BUFFEROUT	CLOSEM	DATE
FILESQ	GET	IFETCH	LENGTH	MOD
MOVLEV	OPENM	OR	RECOVR	REMARK
TIME	UNIT			

PART OF PROGRAM

- ADD - ADD A PROCEDURE
- COPY - COPY PROCEDURES
- DELETE - DELETE A PROCEDURE
- EOJ - ABNORMAL TERMINATION ROUTINE
- GETNAME - EXTRACT PROCEDURE NAME FROM HEADER STATEMENT
- GETNEW - GET PROCEDURE NAME FROM NEW PROCEDURE
- GETNEW1 - GET NEW PROCEDURE (ENTRY POINT IN GETNEW)
- GETPRO - BUFFER IN ONE PROCEDURE
- GETPRO2 - BUFFER IN FIRST TWO WORDS OF A PROCEDURE
- GETT - EXTRACT ONE PROCEDURE
- HEADERS - LIST PROCEDURE HEADERS
- LIST - LIST ONE OR ALL PROCEDURES
- NAMES - LIST PROCEDURE NAMES
- PRTDEL - PUT NUMBER OF EMPTY RECORDS DELETED IN DAYFILE
- PUTPRO - BUFFER OUT ONE PROCEDURE
- QUICK - QUICK LIST OF PROCEDURE NAMES (NO HEADINGS)
- REPL - REPLACE A PROCEDURE

OTHERS

- EXTPRM - EXTRACT NEXT PARAMETER FROM STRING
- GETLFNS - GET ACTUAL LOCAL FILE NAMES
- PUTCHA - INSERT CHARACTER INTO ARRAY
- REDUCE - ADJUST CORE AS REQUIRED
- REQUEST - GET PF SPACE FOR OUTPUT FILE
- UNLOAD - RETURN FILES

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

L41FMT L51FMT L61FMT L71FMT L77FMT

L81FMT L91FMT

FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

R47FMT

OTHERS

NROWS - COMPUTE NUMBER OF ROWS IN PRINTOUT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 05/28/76

DATE(S) REVISED

02/03/77 - PROCESS EMPTY RECORDS

01/17/78 - MODIFY FOR CCL AND B/R

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'PRUDMP'

PURPOSE

OCTAL AND CHARACTER DUMP OF DISK FILE BY RELATIVE PRU NUMBER

FUNCTIONAL CATEGORIES: J9 K3

REMARKS

NONE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	FILESQ	GETP	IFETCH	MAXO
MOD	MOVLEV	OPENM	SHIFT	SKIP
STOREF				

PART OF PROGRAM

DMP - DO ACTUAL PRINTING OF THE PRU
EOJ - ABNORMAL TERMINATION ROUTINE
GETFMTS - DEFINE FORMATS FOR 'DMP'

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
IFMTV - FAST VARIABLE LENGTH I-FORMAT DECODE
MFETCH - READ SPECIFIED WORD IN USER'S FL
REPLACM - REPLACE MULTIPLE CHARACTERS IN AN ARRAY
SETREW - DECODE REWIND OPTION

ARITHMETIC STATEMENT FUNCTIONS

NONE

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

UNIT	#	LFN	USE
------	---	-----	-----

		OUTPUT	LISTABLE OUTPUT
		TAPE-1	FILE TO BE DUMPED

EXECUTION

FROM BATCH

ATTACH,TAPE1,.... DISK FILE TO BE DUMPED
BEGIN,UTILITY,,PRUDMP,.....

FROM TTY

ATTACH,TAPE1,.... DISK FILE TO BE DUMPED
BEGIN,UTILITY,,PRUDMP,....OUT,....
ROUTE.OUT,DC=PR,....

EXECUTE CARD PARAMETERS

PRUDMP,INFILE,START,NPRUS,OUTPUT,REW,SUP,CC,PRUS,WRDS.

INFILE - INPUT FILE TO BE DUMPED
START - STARTING PRU NUMBER (DECIMAL)
0 OF OMITTED - START AT BEGINNING OF FILE
NPRUS - NUMBER (DECIMAL) OF PRUS TO BE DUMPED
(DEFAULT: 9999999 (ALL OF FILE))
OUTPUT - LISTABLE OUTPUT
REW - INFILE REWIND OPTION
A - REWIND AFTER USE
B - REWIND BEFORE USE (DEFAULT)
R - REWIND BEFORE AND AFTER USE
U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE
OTHER - NO REWIND
(ANY WORDS BEGINNING WITH THESE LETTERS
WILL PRODUCE THE SAME RESULTS)
SUP - CHARACTER PRINTING SUPPRESS OPTION
OMITTED OR SUP - SUPPRESS CHARACTERS WITH
DISPLAY CODE 60B OR
HIGHER (DEFAULT)
ANYTHING ELSE - PRINT ALL CHARACTERS
CC - CARRIAGE CONTROL OPTION
OMITTED OR 'CC' - PRINT DUMP ON NEW PAGE
ANYTHING ELSE - PRINT DUMP ON SAME PAGE
PRUS - OMITTED OR 'OPRU' - PRINT OCTAL PRU COUNT
ANYTHING ELSE - PRINT DECIMAL PRU COUNT
WRDS - OMITTED OR 'OWRD' - PRINT OCTAL WORD COUNT
ANYTHING ELSE - PRINT DECIMAL WORD COUNT
NOTE: WORD COUNT WITHIN PRU IS ALWAYS OCTAL.

DEFAULT EXECUTE CARD

PRUDMP,TAPE1,1,9999999,OUTPUT,BEFORE,SUP.

FL NEEDED TO LOAD: 32000B

FL NEEDED TO RUN : 23000B

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 05/24/76 - TOTAL REWRITE DUPLICATING AND
EXPANDING THE CAPABILITIES OF THE
SCOPE 3.3 PROGRAM WRITTEN BY MEL
HAAS - DTNSRDC CODE 1843

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'PR2UP'

PURPOSE

THIS PROGRAM IS INTENDED TO REFORMAT A SINGLE-COLUMN TEXT FILE COMPOSED OF 60-CHARACTER LINES INTO A 2-UP (DOUBLE-COLUMN) FORMAT HAVING MAXIMUM TOTAL LINE LENGTH OF 132 PRINTABLE CHARACTERS (PLUS 1 POS FOR CARRIAGE CONTROL). THE OUTPUT WILL BE SUITABLE FOR PRINTING EITHER ON A LINE PRINTER OR ON XEROX-1200 8-1/2 X 11 PAPER.

THE ORIGINAL MOTIVATION FOR WRITING PR2UP WAS TO ALLOW THE COMPUTER CENTER NOTES (DISTRIBUTED TO ALL USERS BY USER SERVICES) TO BE PRINTED ON THE XEROX-1200, 2-UP.

FUNCTIONAL CATEGORIES: M6 O1

LANGUAGE: COBOL 5

REMARKS

INPUT FILE (ONEUP) CONSTRAINTS -

1. REPORT LINES MUST NOT EXCEED 61 CHARACTERS INCLUDING CARRIAGE CONTROL CHARACTER.
2. CHARACTER POSITION 1 OF EACH LINE MUST CONTAIN ONE OF THE FOLLOWING VALID CARRIAGE CONTROLS -
 - "1" - PAGE EJECT AND PRINT
 - " " - SPACE 1 AND PRINT
 - "0" - SPACE 2 AND PRINT
 - "-" - SPACE 3 AND PRINT
3. EACH PAGE IN THE ONEUP FILE BECOMES A 60-CHARACTER-WIDE COLUMN (LEFT OR RIGHT) IN THE TWOUP FILE. ONEUP PAGE SIZE (I.E., VERTICAL LENGTH) CAN BE SPECIFIED BY SETTING CARRIAGE CONTROL = "1" (CHARACTER POSITION 1) ON EACH LINE WHICH BEGINS A NEW ONEUP PAGE. EACH OF THESE LINES WILL THEN BE FORCED TO LINE 1 OF THE NEXT TWOUP COLUMN (EITHER THE RIGHT COLUMN OF THE CURRENT PAGE OR THE LEFT COLUMN OF THE NEXT PAGE).

A MAXIMUM OF 60 LINES (INCLUDING SKIPPED LINES) WILL BE PRINTED IN EACH TWOUP COLUMN. IF THE TWOUP LINE COUNT EXCEEDS 60 (DUE TO MISSING OR MISPLACED PAGE EJECT CHARACTER), THE "61ST" LINE WILL BE TREATED AS THOUGH IT CONTAINED A CARRIAGE-CONTROL = "1", AND IT WILL BE PRINTED AT THE TOP OF THE NEXT COLUMN.

EXECUTION

FROM BATCH

ATTACH,UTILITY.

ATTACH,CBL5,461COBOL5,ID=CSYS.

LIBRARY,UTILITY,CBL5.

--IF 1-UP FILE CREATED IN PREVIOUS JOB--

ATTACH,ONEUP,....

--IF 1-UP FILE (PRNT) CREATED EARLIER THIS JOB--
FILE,ONEUP.LFN=PRNT.

PR2UP.

ROUTE,TWOUP,DC=PR,.....

TO PRINTER OR XEROX-1200

' 7/8/9 EOR

XX COLS 1-2 = NUMBER OF PAGES PER REPEATING SET.

" 6/7/8/9 EOF

FROM TTY

CONNECT,INPUT,OUTPUT

ATTACH,UTILITY.

ATTACH,CBL5,461COBOL5,ID=CSYS.

LIBRARY,UTILITY,CBL5.

--IF 1-UP FILE CREATED IN PREVIOUS JOB--

ATTACH,ONEUP,....

OR--IF 1-UP FILE (PRNT) CREATED EARLIER THIS JOB--
FILE,ONEUP.LFN=PRNT

PR2UP

XX (ENTER NUMBER PAGES PER SET AFTER "?" PROMPT)

ROUTE,TWOUP,DC=PR,....

EXECUTE CARD PARAMETERS

PR2UP.

DEFAULT EXECUTE CARD

PR2UP.

FL NEEDED TO LOAD: 35000B WORDS

FL NEEDED TO RUN : 57000B WORDS

DATA CARD

COL CONTENTS

1-2 2-DIGIT NUMBER OF PAGES (01-99) IN EACH REPEATING
OUTPUT SET (E.G., CENTER NOTES ARE USUALLY 1-3
PAGES PER ADDRESSEE SET). IF ONEUP FILE IS ONE
CONTINUOUS SET, SPECIFY EITHER EXACT PAGE COUNT
ON ONEUP FILE OR ANY EVEN NUMBER TO ENSURE THAT
BOTH COLUMNS OF EACH 2-UP PAGE ARE USED.

ERROR MESSAGES

LINE DROPPED - (IMAGE OF DROPPED LINE)

MESSAGE ISSUED WHEN AN INPUT LINE HAS AN INVALID
CARRIAGE CONTROL CHARACTER IN COLUMN 1. THE LINE
IS DROPPED.

INPUT UNITS
LFN

USE

INPUT DATA CARD INPUT.
ONEUP DISK FILE INPUT CONTAINING REPORT TO BE
REFORMATTED.

OUTPUT UNITS
LFN

USE

OUTPUT STANDARD OUTPUT FILE CONTAINING ERROR MESSAGES.
TWOUP DISK FILE OUTPUT CONTAINING TWO 60-CHARACTER
COLUMNS PER PAGE.

EXAMPLE (BATCH)

REFORMAT (2-UP) A TEXT FILE HAVING REPEATING
SETS OF 3 PAGES EACH. PRINT ON XEROX-1200.
ATTACH,UTILITY.
ATTACH,CBL5.461COBOL5,ID=CSYS.
LIBRARY,UTILITY,CBL5.
REWIND,PRNT.
FILE,ONEUP,LFN=PRNT.
PR2UP.
ROUTE,TWOUP,TID=C,DC=PR,FC=HH.
' 7/8/9 EOR
03 << DATA CARD - PAGES PER SET
" 6/7/8/9 EOF

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED
PART OF LANGUAGE
NONE
OTHERS
NONE

AUTHOR
CHARLES L. ORR - DTNSRDC CODE 1892.1

DATE WRITTEN: 02/02/79

DATE(S) REVISED

07/29/80 - CLO- CONVERT FROM COBOL4 TO COBOL5.
09/15/80 - CLO- ESTABLISH DEFAULT PAGE SIZE = 60.
10/23/80 - ATS- CHANGE PROGRAM-ID TO 'PR2UP'.

LOCATION OF DECKS

SOURCE
UPDATE LIBRARY: UTILITYPL,ID=CSYS
OBJECT
EDITLIB USER LIBRARY: UTILITY

PROGRAM 'PTIM'

PURPOSE

PRINT CPA, CPB, CPA+CPB, IO AND PP TIMES SINCE START OF JOB
OR INTERCOM SESSION

FUNCTIONAL CATEGORIES: QO

REMARKS

OUTPUT FILE WILL BE CONNECTED.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CONNEC

OTHERS

ALTIME - OBTAIN TIMES

LANGUAGE: FORTRAN IV

OUTPUT UNITS

UNIT	#	LFN	USE
OUTPUT			LISTABLE OUTPUT

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LDSET,LIB=UTILITY.

PTIM.

FROM TTY

ATTACH,UTILITY.

LIBRARY,UTILITY.

PTIM.

EXECUTE CARD PARAMETERS

PTIM,OUTPUT.

OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

PTIM,OUTPUT.

FL NEEDED TO LOAD: 22000B

FL NEEDED TO RUN : 13000B

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 01/08/76

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'PURPOSE'

PURPOSE

EXTRACT PURPOSE INFORMATION FROM DOCUMENTATION FILES
(WHICH WERE PREPARED IN THE FORMAT GENERATED BY PROGRAM
'DOC')

FUNCTIONAL CATEGORIES: S0 Q6

REMARKS

DOCUMENTATION FILE IS COMPATIBLE WITH AN UPDATE 'SOURCE'
FILE OF *DECK'S ONLY.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE
AND DATE EOF OR RECOVER
REMARK SHIFT TIME
PART OF PROGRAM
EQJ - ABNORMAL TERMINATION ROUTINE
OTHERS
GETLFS - GET ACTUAL FILE NAMES
PAKLFT - SQUEEZE BLANKS AND ZEROS OUT OF PFN
UNLOAD - RETURN,TAPE1.
ZPFUNC - ATTACH DOCUMENTATION FILE

ARITHMETIC STATEMENT FUNCTIONS

L11FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L61FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L77FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
R92FMT - FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
1	ZZDOC	FILE CONTAINING DOCUMENTATION (ATTACHED AND RETURNED WITHIN PROGRAM) (IF THE USER REPLACES THE FILE NAME AT EXECUTION TIME, THE FILE IS ASSUMED TO BE ALREADY ATTACHED AND WILL NOT BE RETURNED)
	OUTPUT	LISTABLE OUTPUT

EXECUTION

FROM BATCH
BEGIN,UTILITY,,PURPOSE,LIBRARY,ID.

FROM TTY
BEGIN,UTILITY,,PURPOSE,LIBRARY,ID,ANY,....
ROUTE,ANY,DC=PR,....

EXECUTE CARD PARAMETERS

PURPOSE, LIBRARY, ID, OUTPUT, LEFT, DOCFILE.

LIBRARY - NAME OF LIBRARY TO BE EXTRACTED

MAY BE ONE OF:

NSRDC

UTILITY (DEFAULT)

ANY OTHER LIBRARY NAME (1-7 CHAR)

PROGRAM WILL ATTACH AND RETURN THE
DOCUMENTATION FILE. THE PFN USED WILL BE
THE LIBRARY NAME SPECIFIED, FOLLOWED BY
'DOCUMENTATION' (DEFAULT IS
'UTILITYDOCUMENTATION')

ID - ID UNDER WHICH DOCUMENTATION IS CATALOGED
(DEFAULT IS THE SYSTEM PUBLIC ACCESS ID)

OUTPUT - LISTABLE OUTPUT

LEFT - PRINT CENTERING

OMITTED OR 'LEFT' - LEFT-JUSTIFIED ON PAGE
ANYTHING ELSE - CENTERED ON LARGE PAGE
(DEFAULT IS LEFT-JUSTIFIED)

DOCFILE - IF USER HAS PREVIOUSLY ATTACHED A
DOCUMENTATION FILE, PLACE LFN HERE AND OMIT
THE FIRST 2 PARAMETERS ('LIBRARY' AND 'ID').
WHEN THIS PARAMETER IS USED AND IS NOT
'ZZDOC', THE FILE IS NOT RETURNED AT END OF
EXECUTION.

DEFAULT EXECUTE CARD

PURPOSE, UTILITY, *---*, OUTPUT, LEFT, ZZDOC.

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 21000B

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 08/04/75

DATE(S) REVISED

05/05/76

05/18/76

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'REDECK'

PURPOSE

CHANGE AN UPDATE COMPILE FILE BACK INTO A SOURCE FILE

FUNCTIONAL CATEGORIES: Q7

REMARKS

*DECK CARDS ARE ADDED BEFORE EACH DECK.
UPDATE SEQUENCING IS REMOVED.

A NEW DECK BEGINS:

A) AFTER END-OF-SECTION OR END-OF-PARTITION;
B) WITH CHANGE OF DECK (COL 74-82) ONLY IF PREVIOUS
CARD WAS FORTRAN END CARD (' END ' IN
COL 1-20) OR COMPASS END CARD ('END ' IN COL 11-14).
THE CONDITIONS FOR B) ALLOW DECKS TO HAVE *COMDECK CALLS
WITHOUT TRIGGERING A NEW DECK. (*COMDECK CALLS HAVE THE
COMDECK NAME IN 74-82, WHICH IS USUALLY DIFFERENT FROM THE
MAIN DECK NAME.)

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED PART OF LANGUAGE

CLOSEM
FILESQ
GET
IFETCH
OPENM
PUT
RECOVR
REMARK
SHIFT
STOREF

OTHERS

EOJ - ABNORMAL TERMINATION ROUTINE
GETLFNS - GET ACTUAL LOCAL FILE NAMES
REDUCE - REDUCE CORE TO MINIMUM NEEDED TO RUN
REQUEST - REQUEST,TAPE2,*PF.

ARITHMETIC STATEMENT FUNCTIONS

A21FMT - FAST A-FORMAT DECODE (LEFT-ADJ, BLANK-FILLED)
A55FMT - FAST A-FORMAT DECODE (LEFT-ADJ, BLANK-FILLED)
A94FMT - FAST A-FORMAT DECODE (LEFT-ADJ, BLANK-FILLED)
L11FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L41FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L81FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
R41FMT - FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

FORTRAN LOCAL
LOGICAL FILE
UNIT NAME

USE

TAPE1 INPUT COMPILE FILE
TAPE2 OUTPUT SOURCE FILE
OUTPUT LISTABLE OUTPUT (DECK NAMES)
DAYFILE TOTAL NUMBER OF DECKS

08/22/77

2-152

REDECK - 1 OF 2

EXECUTION

FROM BATCH AND TTY
ATTACH,OLDPL,...
UPDATE,P,...
ATTACH,UTILITY.
LIBRARY,UTILITY.
REDECK,COMPILE.
(CATALOG,TAPE2,...)

EXECUTE CARD PARAMETERS

REDECK,INFILE,OUTFILE,REW,OUTPUT.

INFILE - INPUT COMPILE FILE

OUTFILE - OUTPUT SOURCE FILE

REW - TAPE1 REWIND OPTION

A - REWIND AFTER USE

B - REWIND BEFORE USE

R - REWIND BEFORE AND AFTER USE

U - REWIND BEFORE, REWIND AND UNLOAD
AFTER USE

OTHER - NO REWIND (DEFAULT)

(ANY WORDS BEGINNING WITH THESE LETTERS WILL
PRODUCE THE SAME RESULTS)

OUTPUT - LISTABLE OUTPUT (DECK NAMES)

DEFAULT EXECUTE CARD

REDECK,TAPE1,TAPE2,NOREW,OUTPUT.

FL NEEDED TO LOAD: 27000B

(PROGRAM REDUCES TO MINIMUM NEEDED TO RUN)

AUTHOR

DAVID V SOMMER - NSRDC CODE 1892.2

DATE WRITTEN: 06/30/75

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'SORTUP'

PURPOSE

GENERATE UPDATE DIRECTIVES TO SORT OLDPL

FUNCTIONAL CATEGORIES: Q7

REMARKS

THIS UTILITY ALLOWS A USER TO SORT THE DECKS IN HIS UPDATE LIBRARY TO BE IN ALPHABETICAL ORDER. THE PRODUCT IS THE NECESSARY UPDATE '*MOVE' DIRECTIVES. A SORTED LIST OF EACH PARTITION IS ALSO PROVIDED.

'SOURCE' AND 'TAPE7' ARE NOT REWOUND.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND EOF

OR

REMARK

SHIFT

OTHERS

PAKLFT - SQUEEZE LEFT AND REMOVE BLANKS

SSORTL - SORT DECK NAMES

ARITHMETIC STATEMENT FUNCTIONS

NROWS - COMPUTE # OF ROWS IN PRINTOUT OF SORTED DECK NAMED

METHOD

THE SOURCE FILE (FROM 'UPDATE,P.F.S.') IS READ AND ALL *DECK AND *COMDECK CARDS ARE DETECTED. THE DECK NAMES ARE CHECKED FOR SPECIAL CHARACTERS. IF THE DECK NAME HAS SPECIAL CHARACTERS, IT IS CONSIDERED A DELIMITER DIVIDING THE LIBRARY INTO LOGICAL PARTITIONS; OTHERWISE, THE NAME IS ADDED TO THE LIST OF NAMES IN THAT PARTITION. UPON ENCOUNTERING THE END OF THE PARTITION, '*MOVE' CARDS ARE WRITTEN ON 'TAPE7' TO SORT THE DECKS IN THAT PARTITION.

UPDATING THE OLDPL WITH THESE DIRECTIVES WILL CAUSE THE OLDPL TO BECOME SORTED ALPHABETICALLY.

INPUT/OUTPUT UNITS

UNIT # LFN

USE

1 SOURCE
7 TAPE7

OUTPUT

SOURCE FILE FROM 'UPDATE,P.F.S.'
WILL CONTAIN '*MOVE' DIRECTIVES
(TO BE USED AS INPUT TO 'UPDATE')
LISTABLE OUTPUT CONTAINING STATISTICS
OF RUN AND SORTED LIST(S)

EXECUTION

FROM BATCH

ATTACH,OLDPL,....
UPDATE,P,F,S.
ATTACH,UTILITY.
LIBRARY,UTILITY.
SORTUP.
REQUEST,NEWPL,*PF.
REWIND,TAPE7.
UPDATE,P,N,I=TAPE7.
CATALOG,NEWPL,....

FROM TTY

ATTACH,OLDPL,....
UPDATE,P,F,S,O=OUT.
ATTACH,UTILITY.
LIBRARY,UTILITY.
SORTUP...OUT.
REQUEST,NEWPL,*PF.
REWIND,TAPE7.
UPDATE,P,N,I=TAPE7,O=OUT.
CATALOG,NEWPL,....
DISPOSE,OUT,PR=XXX.

EXECUTE CARD PARAMETERS

SORTUP,INFILE,MOVEDIR,OUTPUT.
INFILE - INPUT FILE (UPDATE SOURCE FILE)
MOVEDIR - OUTPUT FILE OF *MOVE DIRECTIVES
OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

SORTUP,SOURCE,TAPE7,OUTPUT.

FL NEEDED TO LOAD: 27000B
FL NEEDED TO RUN : 17000B

AUTHOR

C FLINK - KPS NWL

DATE WRITTEN: 09/26/73

DATE(S) REVISED

11/29/73 - V1.1 - DAVID V SOMMER - NSRDC CODE 1892.2
03/17/75

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'S2KRNM'

PURPOSE

RENAME ACCOUNT NUMBER ON CATALOGED S2000 DATA BASE FILES

FUNCTIONAL CATEGORIES: Q0

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

PROGRAM ATTACHES AND DOES A RENAME ON EACH OF THE SIX FILES FOR A GIVEN DATA BASE. ONLY THE ACCOUNT FIELD IS CHANGED.

USER DOES NOT HAVE TO KNOW THE S2000 PASSWORDS.

PROGRAM USES 'TAPE77' AS A WORK FILE.

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LIBRARY,UTILITY.

S2KRNM.

' 7/8/9 EOR

<DATA-BASE-NAME> (1-20 CHARACTERS)

<USER-ID> (1-7 CHARACTERS)

<NEW-ACCOUNT-NUMBER> (10 CHARACTERS)

" 6/7/8/9 EOF

FROM TTY

CONNECT,INPUT,OUTPUT

BEGIN,UTILITY,,S2KRNM

(PROGRAM WILL PROMPT FOR DATA BASE NAME, USER ID,
AND ACCOUNT NUMBER)

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 20000B

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

REMARK

OTHERS

IPAKLFT - SQUEEZE LEFT AND REMOVE BLANKS

MOVSTR - MOVE CHARACTER STRING

UNLOAD - RETURN FILE

ZPFUNC - ATTACH AND RENAME FUNCTIONS

AUTHOR

BRUCE D BLACK - DTNSRDC CODE 1892.1 (CDC)
SHARON GOOD - DTNSRDC CODE 1892.1

DATE WRITTEN: 12/15/77

DATE(S) REVISED

03/15/79 - CORRECT AC, PW PLACEMENT (SG)

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: SPECIALPL, ID=****, PW=****

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'TAPDMP'

PURPOSE

DUMP SELECTED PORTIONS OF A 7-TRACK MAGNETIC TAPE WRITTEN IN AN UNKNOWN DENSITY AND/OR MODE. IT IS CONTROLLED BY A SERIES OF FREE-FIELD CONTROL CARDS CONTAINING ORDERS FOR THE DUMPING, SKIPPING OR BACKSPACING OF RECORDS OR FILES.

FUNCTIONAL CATEGORIES: J9 K4

EXAMPLE

DUMP THE FIRST 2 AND LAST 2 RECORDS OF A FILE:

```
CXXX,MT1. NAME/CODE
CHARGE CARD
VSN,DTAPE=SL0TXX=EXTID.
REQUEST,DTAPE,HY,NORING.
ATTACH,UTILITY.
LDSET,LIB=UTILITY.
TAPDMP.
' 7/8/9 EOR
DUMP 2 RECORDS. SKIP 1 FILE.
BACKSPACE 2 RECORDS. DUMP 2 RECORDS.
" 6/7/8/9 EOF
```

NOTE: THE DATA CARD COULD HAVE BEEN ABBREVIATED AS:
D 2 R. S 1 F. B 2 R. D 2 R.

NOTE: OUTPUT WILL BE UP TO 4096 LINES. TO CHANGE THIS, USE
TAPDMP(LC=NNNNNNN) WHERE NNNNNNN IS THE NEW LINE
COUNT LIMIT (1-9999999).

DATA CARDS

DATA CARDS ARE PUNCHED IN FREE FORM WITH THE FIELDS SEPARATED BY BLANKS AND THE COMMANDS SEPARATED BY PERIODS. ANY NUMBER OF COMMANDS MAY APPEAR ON A CARD. BUT COMMANDS MAY NOT BE SPLIT ACROSS CARDS. THE FULL COMMAND, OR ITS ABBREVIATION, IS OBEYED UNTIL ONE OF THE FOLLOWING CONDITIONS:

- 1) THE END OF THE COMMAND STRING;
- 2) AN END-OF-TAPE CONDITION IS DETECTED;
- 3) AN INVALID COMMAND IS ENCOUNTERED.

COMMANDS

COMMANDS CONTAIN 1, 2 OR 3 FIELDS AND ARE SUMMARIZED, WITH ABBREVIATIONS, IN THE TABLE BELOW:

FIELD 1	ABBR.	FIELD 2	FIELD 3	ABBR.
DUMP	D	N	RECORD(S)/FILE(S)	R/F
PRINT	P	N	DITTO	
INTERPRET	I	N	DITTO	
SKIP	S	N	DITTO	
BACKSPACE	B	N	DITTO	
EXPECT	E	200/556/800	BINARY/CODED	B/C
NAME=	N=	FILENAME	,NOREWIND	,N
ALL	A			
REWIND	R			

COMMAND ACTION
DUMP

- CODED READ: TAPE CONTENTS PRINTED AS A HOLLERITH STRING WITH EACH POSITION COUNT SHOWN.
BINARY READ: TAPE CONTENTS PRINTED AS OCTAL WORDS.

EACH RECORD HAS A HEADER SHOWING ITS RECORD AND FILE NUMBER ON THE TAPE.

PRINT

- CODED READ: SAME AS DUMP.
BINARY READ: CONTENTS PRINTED IN HOLLERITH. TO PREVENT PROBLEMS WITH EMBEDDED BINARY ZEROS, THESE ARE CHANGED TO BLANKS BEFORE PRINTING.

INTERPRET

- CODED READ: SAME AS DUMP.
BINARY READ: PRINTED IN OCTAL AND HOLLERITH. AS IN THE PRINT COMMAND.

SKIP

- SKIP DESIGNATED NUMBER OF RECORDS OR FILES. ALL RECORDS READ ARE FULLY CHECKED FOR READABILITY AND ARE TALLIED IN THE RECORD AND FILE COUNT, BUT WILL NOT BE PRINTED UNDER ANY CONDITION.

BACKSPACE

- BACKSPACE SPECIFIED NUMBER OF RECORDS OR FILES. IF A FILE MARK OR BEGINNING OF TAPE IS ENCOUNTERED WHILE BACKSPACING, TAPE MOTION STOPS WITH THE TAPE POSITIONED AHEAD OF THE FILE MARK.

EXPECT

- IF THE USER KNOWS THE MODE AND/OR DENSITY USED TO WRITE THE TAPE, THE FIRST READ CONDITIONS USED BY "TAPDMP" CAN BE SET WITH THE EXPECT COMMAND. THIS WILL ALSO DETERMINE THE MODE AND DENSITY USED TO PRINT A RECORD IN CASE AN UNRECOVERABLE PARITY ERROR IS ENCOUNTERED.

NAME=

- THIS COMMAND ALLOWS THE USER TO OVERRIDE THE DEFAULT FILENAME (DTAPE). THUS, MANY TAPES CAN BE DUMPED IN ONE EXECUTION OF THE PROGRAM.

THE THIRD FIELD (NOREWIND) IS USED TO INHIBIT THE INITIAL REWIND ON THE TAPE BEING DUMPED. IN THIS CASE, REVERSE MOTION OF THE TAPE WILL CAUSE THE FIRST RECORD AND FILE TO HAVE ORDINALS OF -1 ASSIGNED, SINCE THE STARTING NUMBERS MUST BE RELATIVE TO THE STARTING POSITION OF THE TAPE.

ALL

- NORMALLY, "TAPDMP" WILL IGNORE SYSTEM NOISE RECORDS INTRODUCED AS A RESULT OF RECOVERED WRITE ERRORS. THIS WILL GIVE THE USER A TRUE COUNT OF HIS DATA RECORDS. IF IT IS DESIRED TO CHECK FOR THE POSSIBLE PRESENCE OF THESE NOISE RECORDS, THE "ALL" COMMAND MAY BE ISSUED TO TALLY EACH PRU OF THE TAPE REGARDLESS OF ITS CONTENT. ONCE ISSUED, THIS COMMAND MAY NOT BE TURNED OFF.

REWIND

- REWIND THE TAPE BEING DUMPED.

DEFAULT SETTINGS

- 1) NAME=DTAPE.
- 2) ALL FILES BEING DUMPED ARE INITIALLY REWOUND UNLESS "NOREWIND" IS SPECIFIED ON THE "NAME=" COMMAND.
- 3) IF NO CONTROL CARDS, "DUMP 5 RECORDS." IS ASSUMED.
- 4) IF A PROBABLE SYSTEM LABEL IS FOUND, THE USER IS INFORMED AND THE LABEL FILE IS INCLUDED IN THE RECORD AND FILE COUNTS.
- 5) THE USER MAY NOT SPECIFY THE KIND OF FILE MARK USED TO DELIMIT FILES. "TAPDMP" WILL INFORM THE USER WHETHER IT HAS FOUND A SCOPE EOF (LEVEL 17 8-CHARACTER PRU) OR A TAPE MARK.

LIMITATIONS

- 1) ONLY THE FIRST 50 COMMANDS WILL BE PROCESSED.
- 2) ONLY 50 FILES PER TAPE CAN BE HANDLED PROPERLY. IF MORE ARE PRESENT, RECORD COUNTS WITHIN THESE FILES CANNOT BE HELD.
- 3) WILL NOT OBEY A COMMAND REQUIRING FORWARD MOTION IF IT HAS FOUND AN EOT REFLECTIVE MARKER AS A RESULT OF COMPLETING THE PREVIOUS COMMAND. SUCH FORWARD POSITIONING WILL ABORT THE RUN.
- 4) THERE IS NO EFFECTIVE LIMITATION ON THE SIZE OF BLOCK WHICH MAY BE DUMPED. "TAPDMP" WILL OBTAIN MORE STORAGE AS NEEDED FOR BUFFER SPACE.
- 5) DENSITY DETERMINATION CANNOT BE DONE WITH CONFIDENCE BETWEEN 556 AND 800 BPI. AS A READ SETTING OF 800 WILL ALSO READ MOST TAPES WRITTEN AT 556 BPI. TO REDUCE THIS PROBLEM AS MUCH AS POSSIBLE, "TAPDMP" TRIES 556 BPI FIRST BEFORE SWITCHING TO ANOTHER DENSITY.
- 6) SUPPORTS ONLY MODEL 657 TAPE DRIVES. NOT USABLE ON THE CYBER 74 WHICH HAS MODEL 677 TAPE DRIVES.

REMARKS

- 1) IF A NEW TAPE IS DUMPED, IT MAY RUN OFF THE END OF THE REEL.

LANGUAGE: RUN FORTRAN AND CDC 6000 CP AND PP COMPASS

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
99	INPUT	INPUT FILE OF COMMANDS
	OUTPUT	LISTABLE OUTPUT

EXECUTION

FROM BATCH

...CARDS TO MOUNT TAPE
BEGIN,UTILITY,,TAPDMP.

' 7/8/9 EOR

(COMMANDS)

" 6/7/8/9 EOF

FROM TTY

CANNOT BE RUN FROM TTY

EXECUTE CARD PARAMETERS

TAPDMP.INPUT.OUTPUT.

INPUT - INPUT FILE OF COMMANDS

OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

TAPDMP.INPUT.OUTPUT.

FL NEEDED TO LOAD: 25000B

FL NEEDED TO RUN : 15000B

(PROGRAM ADJUSTS CORE UP AND DOWN AS REQUIRED)

AUTHOR

R. S. SMITH

DATE WRITTEN: APRIL, 1972

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'TAPLIST'

PURPOSE

- PREPARE TWO LISTS FROM MAGTAPEDOCUMENTATION FILE:
- 1) LIST OF TAPE NUMBER, LABEL, DENSITY, REMARKS AND DESCRIPTION FOR EACH TAPE DOCUMENTED IN FILE
 - 2) LIST OF TAPE NUMBERS AND LABELS

FUNCTIONAL CATEGORIES: S0 Q6

LANGUAGE: FORTRAN IV

REMARKS

INFORMATION IS EXTRACTED FROM A FILE OF DOCUMENTS WHICH ARE IN THE FORMAT GENERATED BY PROGRAM 'MTDOC' AND CATALOGED AS 'MAGTAPEDOCUMENTATION,ID=CXXX', WHERE CXXX' IS SUPPLIED TO THE PROGRAM.

EXECUTION

FROM BATCH
BEGIN,UTILITY..TAPLIST,CXXX.

FROM TTY
BEGIN,UTILITY..TAPLIST,CXXX,OUT.
ROUTE,OUT,DC=PR.....

EXECUTE CARD PARAMETERS

TAPLIST.ID,OUTPUT,LEFT.

ID - ID UNDER WHICH PFN MAGTAPEDOCUMENTATION IS CATALOGED
OUTPUT - LISTABLE OUTPUT
LEFT - CENTERING OPTION
OMITTED OR LEFT - PRINT LEFT-JUSTIFIED
ANYTHING ELSE - PRINT CENTERED ON WIDE PAGE

DEFAULT EXECUTE CARD

TAPLIST.*,OUTPUT,LEFT.
* - USER MUST SUPPLY

FL NEEDED TO LOAD: 32000B
FL NEEDED TO RUN : 22000B
(PROGRAM ADJUSTS CORE AS REQUIRED)

INPUT/OUTPUT UNITS

UNIT # LFN

USE

UNIT #	LFN	USE
1	OUTPUT ZZDOC	LISTABLE OUTPUT DOCUMENTATION FILE (ATTACHED AND RETURNED BY PROGRAM)

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

DATE	EOF	MINO	MCD	RECOVR
REMARK	SHIFT	TIME		

PART OF PROGRAM

EOJ	- ABNORMAL TERMINATION ROUTINE
PRT	- PRINT REMARKS AND DESCRIPTION SECTIONS

OTHERS

EQU60	- COMPARE 2 ARRAYS
GETLFNS	- GET ACTUAL LOCAL FILE NAMES
REDUCE	- ADJUST CORE UP AND DOWN AS REQUIRED
UNLOAD	- RETURN, ZZDOC.
VFILL	- FILL ARRAY WITH WORD
ZPFUNC	- ATTACH, ZZDOC, MAGTAPEDOCUMENTATION, ID=CXXX.

ARITHMETIC STATEMENT FUNCTIONS

NONE

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 10/06/76

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'UNDOCIT'

PURPOSE

REMOVE THE PAGING WHICH WAS ADDED TO DOCUMENT(S) BY PROGRAM
'DOCIT'

FUNCTIONAL CATEGORIES: Q6

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

A SINGLE DOCUMENT MAY BE PRECEDED BY A *DECK CARD.
MULTIPLE DOCUMENTS SHOULD EACH BE PRECEDED BY A *DECK CARD.

EXECUTION

FROM BATCH
NOT DESIGNED FOR BATCH USE

FROM TTY

CONNECT,OUTPUT
ATTACH,UTILITY.
LIBRARY,UTILITY.
PROGDOC,MYLIB,XXXX,PROG.OLD.
(GET EXISTING DOCUMENT 'PROG' FROM DOCUMENT FILE
HAVING PFN=MYLIBDOCUMENTATION, ID=XXXX, AND PUT INTO
FILE 'OLD'.)
UNDOCIT,OLD,OLD1.
(REMOVE OLD PAGING)
EDITOR
EDIT,OLD1,SAVE
(MAKE CHANGES DESIRED, INCLUDING RESTRUCTURING OF
PAGES. INDICATE START OF EACH PAGE BY PUTTING A
'1' IN COLUMN 1 OF EACH LINE WHICH IS TO BE THE FIRST
LINE OF A PAGE.)
SAVE,NEWDOC,NOSEQ
(NETED,OLD1 COULD ALSO BE USED INSTEAD OF EDITOR/EDIT/
SAVE/BYE)
LINER,NEWDOC.
(WILL COUNT PAGES AND NUMBER OF LINES PER PAGE. IF
ANY PAGE HAS MORE THAN 59 LINES, GO BACK AND
RESTRUCTURE.)
BYE
DOCIT,NEWDOC,FILE.
(PUT PAGING BACK ON)
BEGIN,DOCREPL,,MYLIB,XXXX,PROG,,FILE,AC,PW1,PW2,PW3,PW4,
PW5.
(REPLACE DOCUMENT 'PROG' ON FILE HAVING
PFN=MYLIBDOCUMENTATION, ID=XXXX. SUPPLY AC, PW1,
PW2,PW3,PW4,PW5, IF REQUIRED.)

EXECUTE CARD PARAMETERS

UNDOCIT,INFILE,OUTFILE,OUTPUT.
INFILE - INPUT DOCUMENT
OUTFILE - OUTPUT DOCUMENT
OUTPUT - LISTABLE OUTPUT (FTN ERROR MESSAGES)

DEFAULT EXECUTE CARD

UNDOCIT,TAPE1,TAPE2,OUTPUT.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 34000B

FL NEEDED TO RUN : 24000B

(PROGRAM ADJUSTS CORE AS REQUIRED)

INPUT/OUTPUT UNITS

UNIT # LFN

USE

DAYFILE	FOR EACH DOCUMENT (AND TOTAL), NUMBER OF CARDS IN AND OUT
OUTPUT	LISTABLE OUTPUT (FTN ERROR MESSAGES)
TAPE1	INPUT DOCUMENT
TAPE2	OUTPUT DOCUMENT

METHOD

THE DOCUMENT IS READ ONE PAGE AT A TIME. IF THE LAST LINE HAS '/' IN COLUMN 4, IT IS REMOVED, AS ARE ANY LINES IMMEDIATELY PRECEDING IT WHICH CONTAIN A '0' IN COLUMN 1 AND BLANKS IN THE REST OF THE LINE.

A COUNT OF THE RECORDS IN AND OUT IS PUT INTO THE DAYFILE.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSEM	FILESQ	GET	IFETCH
MOVLEV	OPENM	OR	PUT	RECOVR
REMARK	REWND	SHIFT		

PART OF PROGRAM

- DFMSG - DAYFILE MESSAGE WRITER
- ENDIT - CLOSE PROGRAM
- EOJ - ABNORMAL TERMINATION ROUTINE
- INITAPE - INITIALIZE FILES
- INITLIZ - INITIALIZE PROGRAM
- PROCESS - MAIN PROCESSING ROUTINE
- UNDO - REMOVE BOTTOM OF PAGE AND OUTPUT THE PAGE

OTHERS

- EQU60 - COMPARE TWO ARRAYS
- GETLFNS - GET ACTUAL LOCAL FILE NAMES
- REQUEST - REQUEST, TAPE2, *PF.

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

L61FMT L71FMT L75FMT L77FMT

FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

R14FMT

AUTHOR
DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 10/28/76

DATE(S) REVISED
12/06/77 - FIX PROGRAM NAME IN MESSAGES
04/28/78 - ALLOW *DECK CARDS AND MULTIPLE DOCUMENTS

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'WHATLIB'

PURPOSE

LIST LIBRARIES SPECIFIED ON LAST LIBRARY CARD

FUNCTIONAL CATEGORIES: Q0

REMARKS

NONE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND DATE TIME

OTHERS

RCPA - READ CONTROL POINT AREA

ARITHMETIC STATEMENT FUNCTIONS

R1FMT - FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

LANGUAGE: FORTRAN IV

OUTPUT UNIT

UNIT #

LFN

USE

OUTPUT

LISTABLE OUTPUT

EXECUTION

FROM BATCH

OF LIMITED USE IN BATCH
BEGIN,UTILITY,,WHATLIB.

FROM TTY

CONNECT,OUTPUT
BEGIN,UTILITY,,WHATLIB.

EXECUTE CARD PARAMETERS

WHATLIB.OUTPUT.
OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

WHATLIB.OUTPUT.

FL NEEDED TO LOAD: 23000B

FL NEEDED TO RUN : 13000B

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 1975

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'WHICHMF'

PURPOSE

TELL INTERACTIVE USER OR BATCH JOB WHICH MAINFRAME IS BEING
USED

FUNCTIONAL CATEGORIES: Q0

LANGUAGE: CDC 6000 CP COMPASS

COMPUTERS

CDC 6000

REMARKS

NONE

EXECUTION

FROM BATCH AND TTY
BEGIN,UTILITY,WHICHMF.

DEFAULT EXECUTE CARD
WHICHMF.

FL NEEDED TO LOAD: 11000B
FL NEEDED TO RUN : 300B

OUTPUT UNIT

UNIT #	LFN	USE
-----	-----	-----
	DAYFILE	OUTPUT MESSAGE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED
PART OF LANGUAGE

NONE

OTHERS

MACHINE - GET BATCH USER DAYFILE HEADING

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 04/18/75

DATE(S) REVISED

08/24/77 - CHANGE NAME FROM WHICHCP TO WHICHMF
ADD MFA/MFB/MFC TO MESSAGE
08/18/80 - ADD CY74/MFD

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL.ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'WHICHOS'

PURPOSE

TELL INTERACTIVE USER OR BATCH JOB WHICH OPERATING SYSTEM IS
BEING USED

FUNCTIONAL CATEGORIES: Q0

LANGUAGE: CDC 6000 CP COMPASS

COMPUTERS

CDC 6000

REMARKS

NONE

EXECUTION

FROM BATCH AND TTY
BEGIN,UTILITY,,WHICHOS.

DEFAULT EXECUTE CARD
WHICHOS.

FL NEEDED TO LOAD: 11000B

FL NEEDED TO RUN : 300B

OUTPUT UNIT

UNIT #	LFN	USE
-----	-----	-----
	DAYFILE	OUTPUT MESSAGE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

NONE

OTHERS

MACHINE - GET BATCH USER DAYFILE HEADING

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 04/18/75

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

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