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DAVID W TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CE--ETC F/G 9/2
COMPUTER CENTER LIBRARIES/UTILITY (PROGRAMS), (U)
SEP 77 D V SOMMER

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COMPUTER CENTER LIBRARIES/UTILITY (PROGRAMS)

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DAVID W. TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CENTER



Bethesda, Md. 20084

COMPUTER CENTER LIBRARIES/UTILITY (PROGRAMS)

by

David V. Sommer

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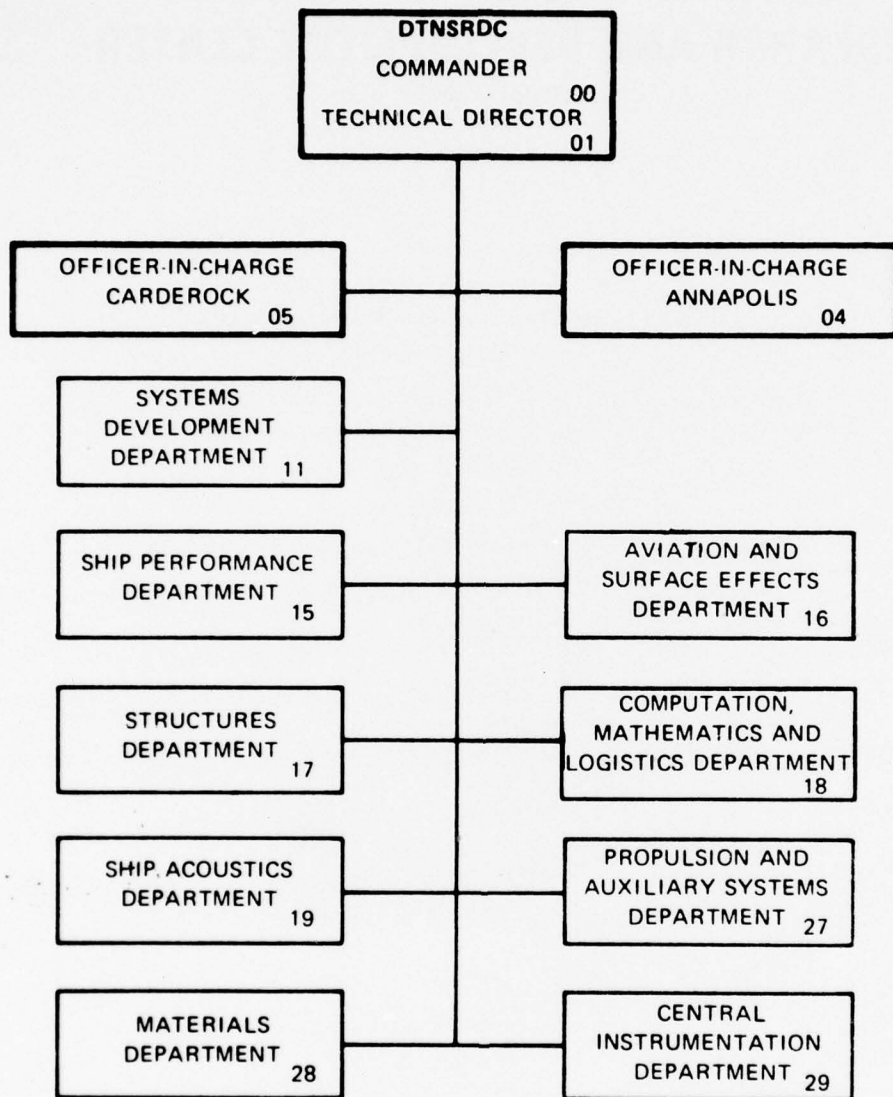
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Computation, Mathematics and
Logistics Department

September 1977

CMLD-77-17

MAJOR DTNSRDC ORGANIZATIONAL COMPONENTS



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* COMPUTER CENTER LIBRARIES / UTILITY
* (PROGRAMS)
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BY
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DEPARTMENTAL REPORT

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***** INTRODUCTION *****

THE COMPUTER CENTER MAKES AVAILABLE, 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 CCLIB-SERIES OF MANUALS CONTAINS THE FOLLOWING, WHICH DESCRIBE THE CONTENTS OF THE VARIOUS LIBRARIES MAINTAINED BY THE COMPUTER CENTER:

CCLIB	- COMPUTER CENTER LIBRARIES	CMLD-77-12
CCLIB/N	- COMPUTER CENTER LIBRARIES/NSRDC (SUBPROGRAMS)	CMLJ-77-15
CCLIB/P	- COMPUTER CENTER LIBRARIES/PROFIL (PROCEDURES)	CMLJ-77-16
CCLIB/U	- COMPUTER CENTER LIBRARIES/UTILITY (PROGRAMS)	CMLJ-77-17
CCLIB/M	- COMPUTER CENTER LIBRARIES/MNSRDC (PROGRAMS)	

THIS MANUAL, CCLIB/U, IS A REFERENCE MANUAL WHICH DESCRIBES ALL THE 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, LIBRARY MAINTENANCE ROUTINES.

*** EXECUTING A PROGRAM ***

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

- 1) ATTACH,UTILITY.
LIBRARY,UTILITY. OR LOSET,LIB=UTILITY.
<PROG>,<PARAMETERS>. WHERE <PROG> IS THE DESIRED PROGRAM
- 2) 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

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.

J0	OUTPUT					
	MPSCM					
J1	BINARY					
	CV29					
J9	COMPOSITE					
	HEXDMP	PRUDMP	TAPDMP			
K1	EXTERNAL-TO-EXTERNAL					
	COPYRE	COPYSEL	PROMNT			
K3	DISK					
	COPYLIB	DOCUMNT	GETOBJ	PRUDMP		
K4	TAPE					
	HEXDMP	TAPDMP				
M1	SORTING					
	AUDSORT	DEKSORT				
M2	CONVERSION AND/OR SCALING					
	CV29					
M4	CHARACTER MANIPULATION					
	COPYEXT	FORMATR				
N2	DUMPING					
	DMPFIL					
O1	OFF-LINE EQUIPMENT					
	CARDS	COPYEXT	CV29	LISTE01	LIST2	PAGEPRT
	CARDS2	COPYRE	LINERL	LISTZ	LIST3	
	CCRM	COPYSEL	LISTCMP	LIST1	LIST4	
Q0	SERVICE OR HOUSEKEEPING, PROGRAMMING AIDS					
	AUDSORT	BANNER3	JOBTIME	LINERL	WHATLIB	WHICHOS
	BANNER	DFDATIM	LINER	PTIM	WHICHMF	
Q6	PROGRAM DOCUMENTATION: FLOW CHARTS, DOCUMENT, STANDARDIZATION					
	DOC	DOCUMNT	MANYDOC	PFDOC	PURPOSE	UNDOCIT
	DOCIT	EXECARD	MTDOC	PROGDOC	TAPLIST	

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PAGE 1-6

Q7	PROGRAM LIBRARY UTILITIES				
	BINDEX	DECKLST	LISTBIN	PROMNT	SORTUP
	DECK	DEKSORT	LISTCMP	REDECK	
R4	TEXT EDITING				
	FORMATR				
S0	INFORMATION RETRIEVAL				
	EXECARD	PAGEPRT	PURPOSE	TAPLIST	

*** DESCRIPTIVE TITLES ***

PROGRAMS IN LIBRARY 'UTILITY' ARE LISTED ALPHABETICALLY BELOW.

AUDSORT PRINT SORTED AUDIT

BANNER PRINT A BANNER (PAGE)

BANNER3 PRINT 3 BANNERS ON ONE PAGE

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

CARDS REPRODUCE A BCD DECK WITH MODIFICATONS (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)

CCRM EXTRACT ALL PAGES FROM COMPUTER CENTER REFERENCE MANUAL WHICH WERE MODIFIED AFTER USER-SPECIFIED DATE

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)

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

CV29 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 IN DAYFILE

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

DOC PREPARE (SUB)PROGRAM AND CATALOGUED PROCEDURE DOCUMENTATION

DOCIT ADD PAGING TO A DOCUMENT

DOCUMNT MAINTAIN A FILE OF DOCUMENTS

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

FORMATR THIS IS A TEXT FORMATTER. IT IS DESIGNED TO BE OF ASSISTANCE TO THE PERSON WHO NEEDS TO MANIPULATE TEXT FILES WHICH ARE NOT INHERENTLY LINE ORIENTED. IT WILL ACCEPT FREE-FORM INPUT AND GENERATE FORMATTED OUTPUT UTILIZING ARBITRARILY SIZED RECORDS. THE INPUT CONSISTS OF TEXT AND OPTIONAL DIRECTIVES WHICH CONTROL SUCH FUNCTIONS AS PARAGRAPH INDENTING AND LINE SPACING.

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

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 RELOCATABLE BINARY MODULES 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

LISTZ LIST ZERO BYTE TERMINATED RECORDS (UP TO 110 CHARACTERS PER RECORD) WITH RECORD NUMBER AND RECORD LENGTHS

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 9 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

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

MPSCM CONVERT PRINTED OUTPUT DATA INTO A COM FORMATTED TAPE TO
PRODUCE MICROFICHE ON THE DATAGRAPHIX 4530 SYSTEM

MTDOC CREATE DOCUMENTATION TO DESCRIBE THE CONTENTS OF A MAGNETIC
TAPE

PAGEPRT PRINT SELECTED PAGE(S) FROM A DOCUMENT

PFDOC CREATE PERMANENT FILE DOCUMENTATION

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

PROMNT MAINTAIN AN ALPHABETICAL, SEQUENTIAL PROCEDURE FILE, EACH
PROCEDURE BEING ONE SCOPE LOGICAL RECORD

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

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

SOPTUP GENERATE UPDATE DIRECTIVES TO SORT OLDPL

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) 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 A DOCUMENT BY PROGRAM
'DOCIT'

WHATLIB LIST LIBRARIES SPECIFIED ON LAST LIBRARY CARD

WHICHCP TELL TELETYPE USER WHICH MACHINE 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'.

INDIVIDUAL DOCUMENTS MAY BE PRINTED USING:

BEGIN,UTILITY,,PROGDOC,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 EOF

PROGRAM 'AUDSORT'

PURPOSE

PRINT SORTED AUDIT

FUNCTIONAL CATEGORIES: M1 Q0

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

THE SORTED LIST WILL HAVE THE FULL PFN SORTED ALPHAMERICALLY. DIFFERENT CYCLES OF THE SAME PFN WILL BE LISTED IN DESCENDING ORDER.

PFN FOR INTERCOM AUDIT IS 29 CHARACTERS; FOR SHORT, PARTIAL AND FULL AUDITS, 40 CHARACTERS.

EXECUTION

FROM BATCH

AUDIT,LF=OUT,....
ATTACH,UTILITY.
LIBRARY,UTILITY.
AUDSORT,OUT.

FROM TTY

AUDIT,LF=OUT,....
CONNECT,OUTPUT.
BEGIN,UTILITY,,AUDSORT,OUT.

EXECUTE CARD PARAMETERS

AUDSORT,AUDFILE,OUTPJT.
AUDFILE - INPUT FILE TO BE SORTED (AUDIT OUTPUT)
OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

AUDSORT,TAPE1,OUTPUT.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 36000B

FL NEEDED TO RUN : 26000B

ERROR MESSAGES

MORE THAN 1000 PFNS, JOB TERMINATED
PROGRAM MUST BE RE-DIMENSIONED. CALL USER SERVICES.

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
1	OUTPUT TAPE1	LISTABLE OUTPUT INPUT FILE TO BE SORTED (AUDIT OUTPUT FILE)
4	ZZWORK	RANDOM WORK FILE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	CLOSMS	EOF	MOVLEV	OPENMS
OR	READMS	RECOVR	REMARK	SHIFT

WRITMS

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
IFMTV - FAST I-FORMAT DECODE
MOVSTR - MOVE CHARACTER STRING
REDUCE - GET ADDITIONAL CORE NEEDED
REPLAC - REPLACE ONE CHARACTER WITH ANOTHER
VFILL - FILL ARPAY WITH WORD
UNLOAD - RETURN,TAPE4.

ARITHMETIC STATEMENT FUNCTIONS

FAST A-FORMAT DECODE

A106FMT

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

R29FMT	R38FMT	R44FMT	R81FMT	R91FMT
R92FMT	R95FMT	R96FMT	R97FMT	R98FMT
R910FMT				

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 01/07/75

DATE(S) REVISED

01/09/75 01/10/75 01/13/75 01/20/75 02/04/75
02/28/75 08/06/76
02/24/77 - MODIFY FULL AUDIT FOR NOS/BE 1.0
02/25/77 - MODIFY FOR NEW NOS/BE SN AUDIT
04/12/77 - MODIFY FOR SHARED-FILES AUDIT HEADINGS

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,IO=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'BANNER'

PURPOSE

PRINT A BANNER (PAGE)

FUNCTIONAL CATEGORY: QJ

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'

DISPOSE,OUT,PR=XYY.

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 - PRINT THE CPU (6400/6600/6700)

DATE - PRINT THE DATE (MMDDYY)

TIME - PRINT THE 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

CPU467 - GET CPU

GETLFNS - GET ACTUAL LOCAL FILE NAMES

LEFTADJ - SQUEEZE LEFT AND REMOVE BLANKS AND 00B

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,....

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

PROGRAM 'BANNER3'

PURPOSE

PRINT 3 BANNERS ON ONE PAGE

FUNCTIONAL CATEGORY: Q0

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

DATE - BANNER IS CURRENT DATE

TIME - BANNER IS CURRENT TIME

DEFAULT EXECUTE CARD

BANNER3,OUTPUT,CPU,DATE,TIME.

DEFAULT PL: 5000 LINES

FL NEEDED TO LOAD: 25000B

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

BANR - WRITE A BANNER
CPU467 - GET THIS CPU
GETLFNS - GET ACTUAL LOCAL FILE NAMES

ARITHMETIC STATEMENT FUNCTIONS

LA2FMT - FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 05/11/77

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'BINDEK'

PURPOSE

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

FUNCTIONAL CATEGORY: 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 'BINDEK')
EDITLIB,L=TAPE1.
BEGIN,UTILITY,,BINDEK.
7/8/9
(EDITLIB LISTLIB OR CONTENT DIRECTIVES)
ENDRUN.
6/7/8/9

FROM TTY

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

EXECUTE CARD PARAMETERS

BINDEK,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
BINDEXTAPE1,OUTPUT,'BINARY FILE',20,LEFT,SORT.

FL NEEDED TO LOAD: 27000B
(PROGRAM GETS CORE AS IT IS NEEDED)

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

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND	EOF	MAX0	MIN0	MOD
MOVLEV	OR	RECOVR	REMARK	SHIFT

PART OF PROGRAM

EOJ - 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-AJJ, ZERO-FILLED)

L43FMT	L45FMT	L71FMT	L76FMT
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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.

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 CATEGORY: 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 LOCAL

LOGICAL FILE

U-N-I-I NAME--

5 INPJT

OUTPUT

PUNCH

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

EXECUTION

FROM BATCH

ATTACH,UTILITY.
LDSSET,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 ITY

ATTACH,IN,..... (FIELD CONTROL CARDS AND DECK)
ATTACH,UTILITY.
LIBRARY,UTILITY.
CARDS,IN,OUT.
DISPOSE,OUT,PR=KYY.
DISPOSE,PUNCH,PU=KYY.

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: 260008

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	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 (DEFAULT: E 77 80 10 10)
G	I1 I2	TEXT...	REPLACE COLUMNS I1 THRU I2 WITH THE SPECIFIED TEXT FIELD (DEFAULT: G 73 76)
M	I1 I2 I3 I4		MOVE FIELD IN COLUMNS I1 THRU I2 TO FIELD IN COLUMNS I3 THRU I4 AND BLANK THE FORMER FIELD (I4 MAY BE OMITTED)
S	I1 I2 I3 I4		SWAP FIELD IN COLUMNS I1 THRU I2 WITH FIELD IN COLUMNS I3 THRU I4. (I4 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 CATEGORY: 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
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FAST L-FORMAT DECODES (LEFT-ADJ, ZERO-FILLED)

L1FMT	L11FMT
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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.
LOSET,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.
DISPOSE,OUT,PR=KYY.
DISPOSE,PUNCH,PU=KYY.

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: 320008

(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 1992.2
(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 'CCRM'

PURPOSE

EXTRACT ALL PAGES FROM COMPUTER CENTER REFERENCE MANUAL
WHICH WERE MODIFIED AFTER USER-SPECIFIED DATE

FUNCTIONAL CATEGORIES: 01

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

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

EXECUTION

FROM BATCH

BEGIN,UTILITY,,CCRM,MONTH,YEAR.

FROM TTY

BEGIN,UTILITY,,CCRM,MONTH,YEAR,OUT.

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

EXECUTE CARD PARAMETERS

CCRM,OUTPUT,MONTH,YEAR,PM.

OUTPUT - LISTABLE OUTPUT

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)

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

CCRM,OUTPUT,0,0,NOPM.

(WILL PRINT ENTIRE MANUAL BUT IS NOT EFFICIENT)

FL NEEDED TO LOAD: 30000B

FL NEEDED TO RUN : 20000B

INPUT/OUTPUT UNITS

UNIT # LFN

USE

OUTPUT LISTABLE OUTPUT
ZZZCCRM COMPUTER CENTER REFERENCE MANUAL
(ATTACHED AND RETURNED BY PROGRAM)

EXAMPLES

TO PRINT ALL PAGES MODIFIED AFTER MARCH, 1976 (REVISIONS
4, 5, ...):
CCRM,,MAR,76.

TO PRINT ALL PAGES MODIFIED IN REVISION 5 ON (REVISION 4
DATE IS JULY, 1976):
CCRM,,7,1976.

TO PRINT ALL PAGES MODIFIED SINCE THE MANUAL WAS PRINTED:
CCRM,,SEPT,75.

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
ZPFUNC - ATTACH COMPUTER CENTER REFERENCE MANUAL

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: 10/13/76

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,IO=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

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 - 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-INTEGGER FOR EDITOR
SEQUENCING INCREMENT. DEFAULT OF 10 IS USED.
INPUT FILE EMPTY
INPUT FILE AT EOI -- 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-INTEGGER FOR STARTING EDITOR
SEQUENCE NJMBER. DEFAULT OF 100 USED.

INPUT/OUTPUT UNITS

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

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE
CLOSEM FILESQ GET IFETCH MAX0
MINO OPENM PUT REMARK WEOR

OTHERS
GETLFNS - GET ACTUAL LOCAL FILE NAMES
IFMTV - FAST VARIABLE I-FORMAT DECODE
LASTC - FIND LAST NON-BLANK CHARACTER
MOVSTR - MOVE CHARACTER STRING
SETREW - DECODE REWIND OPTION
VFILL - FILL ARRAY WITH WORD

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 02/25/77

DATE(S) REVISED

LOCATION OF DECKS

SOURCE
UPDATE LIBRARY: UTILITYPL, ID=CSYS
OBJECT

PROGRAM 'COPYLIB'

PURPOSE

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

FUNCTIONAL CATEGORY: 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

OBJCT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'COPYRE'

PURPOSE

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

FUNCTIONAL CATEGORY: 01 K1

REMARKS

NONE

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

LANGUAGE: FORTRAN IV

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.

INPUT/OUTPUT UNITS

UNIT	LEN	USE
INPUT		RANGE CARDS INPUT FILE
OUTPUT		LISTABLE OUTPUT
TAPE1		FILE TO BE COPIED AND RE-ARRANGED
TAPE2		OUTPUT (RE-ARRANGED) FILE

EXECUTION

FROM BATCH

ATTACH,TAPE1,.... (FILE TO BE COPIED AND RE-ARRANGED)
REQUEST,TAPE2,*PF.
BEGIN,UTILITY,,COPYRE.
CATALOG,TAPE2,....
7/8/9 EOR
(RANGE CARDS. END WITH 0,0)
6/7/8/9

FROM TTY

ATTACH,TAPE1,.... (FILE TO BE COPIED AND RE-ARRANGED)
CONNECT,INPUT,OUTPUT.
REQUEST,TAPE2,*PF.
BEGIN,UTILITY,,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.

FL NEEDED TO LOAD: 32000B

FL NEEDED TO RUN : 22000B

(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.

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

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 CATEGORY: 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
COPYSEL,INPUT,TAPE1,TAPE2,NOREW,OUTPUT.

FL NEEDED TO LOAD: 320008
FL NEEDED TO RUN : 220008

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 - DTNSROC 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 'CV29'

PURPOSE

CONVERT TO 029 PUNCH CODE

FUNCTIONAL CATEGORIES: J1 M2 01

LANGUAGE: FORTRAN IV AND CDC 6000 COMPASS

REMARKS

OUTPUT FILE TO BE PUNCHED IS 'TAPE1'. THE USER MAY NOT CHANGE IT. 'TAPE1' IS NOT REWOUND.

EXECUTION

FROM BATCH AND TTY
ATTACH,ANY,.... (FILE TO BE CONVERTED)
REQUEST,TAPE1,*Q.
BEGIN,UTILITY,,CV29,ANY.
DISPOSE,TAPE1,P8=XXX.

EXECUTE CARD PARAMETERS

CV29,INFILE,,OUTPUT.
INFILE - FILE TO BE CONVERTED
OUTPUT - LISTABLE OUTPUT

DEFAULT EXECUTE CARD

CV29,INPUT,,OUTPUT.

FL NEEDED TO LOAD: 24000B

INPUT/OUTPUT UNITS

UNIT--#	LEN--	USE-----
5	INPUT	INPUT FILE
	OUTPUT	LIST NUMBER OF CARDS PUNCHED
	TAPE1	OUTPUT FILE TO BE PUNCHED
	DAYFILE	NUMBER OF CARDS PROCESSED

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE
REMARK
OTHERS
CONVCB WPRU

AUTHORS

? - ORIGINAL AUTHOR
SHARON E GOOD - DTNSRDC CODE 1892.2

DATE WRITTEN: / /7

DATE(S) REVISED

10/10/75

LOCATION OF DECKS

SOURCE
CODE 1892
OBJECT
EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DECK'

PURPOSE

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

FUNCTIONAL CATEGORY: Q7

REMARKS

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

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
LASTC - FIND LAST NON-BLANK CHARACTER IN STRING
PAKLFT - SQUEEZE LEFT AND REMOVE BLANKS AND 00B
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-AJJ, ZERO-FILLED)
R16FMT R19FMT

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
-----	-----	-----
	OUTPUT	LISTABLE OUTPUT
	TAPE1	INPUT UPDATE 'SOURCE' FILE
	DAYFILE	TOTALS ARE PUT INTO DAYFILE

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.

FL NEEDED TO LOAD: 34000B

FL NEEDED TO RUN : 21000B

(PROGRAM ADJUSTS CORE AS REQUIRED)

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,

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 CATEGORY: 07

REMARKS

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

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
LASTC - FIND LAST NON-BLANK CHARACTER IN STRING
PAKLFT - SQUEEZE LEFT AND REMOVE BLANKS AND 00B
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

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

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

EXECUTION

FROM BATCH

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

FROM TTY

ATTACH,UTILITY.
ATTACH,TAPE1,.... (DOCUMENT FILE)
LIBRARY,UTILITY.
DECKLST,,OJT.
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.

FL NEEDED TO LOAD: 27000B

FL NEEDED TO RUN : 20000B

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,

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 009 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 0 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,JC=PR,.....

EXECUTE CARD PARAMETERS

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

- INFILE - INPUT FILE (UPDATE LISTING)
- OUTPUT - LISTABLE OUTPJT
- 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

06/03/76 - 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 CATEGORY: Q0

LANGUAGE: CDC 6000 CP COMPASS

REMARKS

NONE

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LOSET,LIB=UTILITY. OR LIBRARY,UTILITY.
DFDATIM.

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,IO=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'DMPFIL'

PURPOSE

DUMP FIRST N WORDS OF EACH LOGICAL RECORD IN M FILES

FUNCTIONAL CATEGORY: 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 N A M E

USE

U N I T	N A M E	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 CATEGORY: 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 LONG(ER) 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										
	FORTRAN	COBOL	OTHER	COVER	PROCED	FORTRAN	COBOL	OTHER	COVER	PROCED						
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 =. (M(F))

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, TAPES=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 10-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--#	--LEN--	-----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	GONNEG	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)
II00	- 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
PMPRT	- 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
PAKLEFT	- 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 EXECJTF CARD OPTION PARAMETER.
ADD MAIN PROGRAM COVER SHEET.

LOCATION OF DECKS

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

PROGRAM 'DOCIT'

PURPOSE

ADD PAGING TO A DOCUMENT

FUNCTIONAL CATEGORY: Q6

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

NORMALLY, PROGRAM 'DOC' (OR 'MTDOC') IS USED TO CREATE A DOCUMENT. AN EDITOR IS THEN USED TO MODIFY IT 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 (' ', '0', '-', '+', 'S', 'T', 'V', 'VC')
	THE FOLLOWING SPECIAL CARRIAGE CONTROL CHARACTERS ARE RECOGNIZED:
	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.
2-72	LINE TO BE PRINTED (CHARACTERS AFTER COLUMN 72 ARE NOT COPIED)

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)
27-36	TYPE OF DOCUMENT. ONE OF: PROGRAM, SUBROUTINE, FUNCTION, PROCEDURE, MAG TAPE.
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:

PROGRAM '<NAME>'
SUBROUTINE '<NAME>'
FUNCTION '<NAME>'
PROCEDURE '<NAME>'
TAPE '<TAPEND>'

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

EXECUTION
FROM BATCH
NOT DESIGNED FOR BATCH USE

FROM TTY
CONNECT,OUTPUT
ATTACH,UTILITY.
LIBRARY,UTILITY.
DOC.
(CREATE DOCUMENT ON FILE 'DOCMT')
EDITOR
EDIT,DOCMT,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
EDITOR MAY BE USED, SUCH AS:
ATTACH,NETED.
NETED,DOCMT
(MODIFY, ETC.)
SAVE NEWDOC)
LINES,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 (1-9)
(IF OMITTED, PROGRAM WILL COUNT PAGES)
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)
OUTPUT - LISTABLE OUTPUT (ERROR MESSAGES)

DEFAULT EXECUTE CARD
DOCIT,TAPE1,TAPE2,,,,OUTPUT.

FL NEEDED TO LOAD: 310008
FL NEEDED TO RUN : 210008

ERROR MESSAGES

ABEND

PROGRAM TERMINATED ABNORMALLY

***** CARD NO. <NNN> <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
 NUMBER OF INVALID CARRIAGE CONTROL CHARACTERS
 ENCOUNTERED.

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	INPJT FILE
	TAPE2	OUTPUT FILE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE:

AND	CLOSEM	DATE	FILESQ	GET
IFETCH	MAX0	MOD	OPENM	OR
PUT	RECOVR	REMARK	SHIFT	

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
 IFMTN - FAST I-FORMAT ENCODE
 IFMTV - FAST VARIABLE I-FORMAT DECODE
 LASTC - FIND LAST NON-BLANK CHARACTER
 MOVSTR - MOVE CHARACTER STRING
 PUTCHA - INSERT CHARACTER INTO STRING
 REPLAC - REPLACE ONE CHARACTER WITH ANOTHER

ARITHMETIC STATEMENT FUNCTIONS

FAST A-FORMAT DECODE (LEFT-ADJ, BLANK-FILLED)
A66FMT A81FMT A88FMT A89FMT A810FMT
FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
L11FMT L21FMT L23FMT L25FMT L31FMT
L41FMT L51FMT L61FMT L81FMT L91FMT
FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)
R11FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1832.2

DATE WRITTEN: 05/04/76

DATE(S) REVISED

05/05/76
06/21/76 - ADD SCAN FOR MTDCC OUTPUT AND OPTIONAL NAME ON
EXECUTE CARD
08/30/76 - MOVE FUNCTION NAME EXTRACTION 2 COLUMNS TO THE
RIGHT. ACCEPT AND IGNORE (COPY) *DECK CARJ.
10/18/76 - 1) CHANGE OUTPUT TO TAPE2 ('OUTPUT' IS FOR ERROR
MESSAGES).
2) REWIND INFILE AND OUTFILE BEFORE AND AFTER.
3) LET PROGRAM COUNT PAGES.
4) DOCUMENT NAME AND PAGE NUMBER MOVED LEFT 1
COLUMN ON BOTTOM LINES.
06/02/77 - 1) ALLOW FOR 6/8 LPI.
2) CONVERT OUTPUT FILE TO 6RM.
3) ADD DOCUMENT TYPE TO BOTTOM LINE OF DOCUMENT.
07/29/77 - 1) REMOVE DOCUMENT TYPE FROM BOTTOM LINE OF
DOCUMENT.

LOCATION OF DECKS

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

PROGRAM 'DOCUMNT'

PURPOSE

MAINTAIN A FILE OF DOCUMENTS

FUNCTIONAL CATEGORY: Q6 K3

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.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM FILESQ IFETCH MOVLEV OPENM
PUT RECOVR REMARK SHIFT

PART OF PROGRAM

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

OTHERS

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

LANGUAGE: FORTRAN IV

INPUT/OUTPUT UNITS

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

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
0 - 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.

FL NEEDED TO LOAD: 31000B

FL NEEDED TO RUN : 22000B

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)

AUTHOR
DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 01/20/76

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 CATEGORY: SU 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 FTN 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 'FORMATR'

PURPOSE

THIS IS A TEXT FORMATTER. IT IS DESIGNED TO BE OF ASSISTANCE TO THE PERSON WHO NEEDS TO MANIPULATE TEXT FILES WHICH ARE NOT INHERENTLY LINE ORIENTED. IT WILL ACCEPT FREE-FORM INPUT AND GENERATE FORMATTED OUTPUT UTILIZING ARBITRARILY SIZED RECORDS. THE INPUT CONSISTS OF TEXT AND OPTIONAL DIRECTIVES WHICH CONTROL SUCH FUNCTIONS AS PARAGRAPH INDENTING AND LINE SPACING.

FUNCTIONAL CATEGORY: M4 R4

LANGUAGE: FORTRAN IV

REMARKS

- 1 - THIS PROGRAM IS BEING MADE AVAILABLE AS RECEIVED (WITH MINOR REVISION). THERE ARE NO PLANS TO EXPAND ITS CAPABILITIES OR TO IMPROVE THE EXISTING FUNCTIONS. SOME EXTENSIONS ARE INDICATED IN THE DIRECTIVE LIST BUT ARE FLAGGED AS NOT IMPLEMENTED.
- 2 - THE PROGRAM WILL GENERATE UNNUMBERED LINES OF UP TO 136 CHARACTERS EACH.
- 3 - THE ??? DIRECTIVE ALLOWS THE PROGRAM TO GENERATE VALID INPUT FOR ITSELF.
- 4 - EDITOR MAY BE USED TO ADD PAGING TO THE OUTPUT. TO FACILITATE THIS, THE OUTPUT FILE SHOULD HAVE A LEFT MARGIN OF 2 OR GREATER.

EXECUTION

FROM BATCH

```
COPYR,INPUT,TAPE1. (OR ATTACH,TAPE1,....)
BEGIN,UTILITY,,FORMATR.
(DO SOMETHING WITH TAPE2)
7/8/9 EOR
(TEXT AND OPTIONAL DIRECTIVES, IF COPYR USED)
6/7/8/9 EOF
```

FROM TTY

```
ATTACH,TAPE1,.... (INPUT DOCUMENT)
BEGIN,UTILITY,,FORMATR.
(DO SOMETHING WITH TAPE2)
```

EXECUTE CARD PARAMETERS

```
FORMATR,INFILE,OUTFILE,OUTPUT.
INFILE - INPUT DOCUMENT FILE
OUTFILE - GENERATED OUTPUT DOCUMENT FILE
OUTPUT - FTN ERROR MESSAGES
```

DEFAULT EXECUTE CARD

```
FORMATR,TAPE1,TAPE2,OUTPUT.
```

FL NEEDED TO LOAD: 27000B

FL NEEDED TO RUN : 17000B

DATA CARDS

COL	CONTENTS
1-2	?? - INDICATES A DIRECTIVE ANYTHING ELSE - ASSUMED TO BE TEXT DATA
3 ON	FOR DIRECTIVES ONLY (?? IN 1-2) THE FOLLOWING DIRECTIVES ARE SUPPORTED:
??C	- GENERATE COMMENT CARDS (* IN COLUMN 1)
??C+	- SAME AS ??C
??C+X	- GENERATE COMMENT CARDS PUTTING X INTO COLUMN 1 (DEFAULT: *)
??C-	- SUSPEND COMMENT CARD GENERATION (DEFAULT)
??D	- PUT DIRECTIVES INTO OUTPUT
??D+	- SAME AS ??D
??D-	- SUPPRESS DIRECTIVES IN OUTPUT
??F	- FORMATTED MODE
??FL,R	- FORMATTED MODE, OUTPUT LEFT AND RIGHT MARGINS ARE L AND R (DEFAULT: ??F7,72)
??IL,R	- INPUT RECORD SIZE (FROM COLUMN L TO COLUMN R) (DEFAULT: ??I1,72)
??P	- INDENT A NEW PARAGRAPH
??P+N	- LEAVE N BLANK LINES BEFORE INDENTING A NEW PARAGRAPH (NOT IMPLEMENTED; SEE REMARK 1)
??S1	- SINGLE SPACE LISTING (DEFAULT)
??S2	- DOUBLE SPACE LISTING
??S3	- TRIPLE SPACE LISTING
??S+N	- SKIP N BLANK LINES (NOT IMPLEMENTED; SEE REMARK 1)
??U	- UNFORMATTED MODE (COPY CARDS TO NEXT DIRECTIVE)

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
	OUTPUT	FTN ERROR MESSAGE FILE
1	TAPE1	INPUT DOCUMENT FILE
2	TAPE2	GENERATED OUTPUT DOCUMENT FILE
	ZZTTYO	TTY PROMPTER

EXAMPLE

ATTACH,TAPE1,FORMATRTEST,ID=CSYS.
COPYSR,TAPE1,OUTPUT. TO LIST ORIGINAL FILE
BEGIN,UTILITY,,FORMATR.
COPYR,TAPE2,OUTPUT. TO LIST FORMATTED FILE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

AND CONNOC EOF MING SHIFT

PART OF PROGRAM

DIREC - PROCESS DIRECTIVES
FETCH - EXTRACT NEXT WORD OF TEXT
GETPARM - GET NUMERIC PARAMETER FROM A DIRECTIVE
INITLIZ - INITIALIZE THE PROGRAM
INSERTB - INSERT A BLANK
MOVIT - MOVE A RECORD
PRINTL - WRITE A LINE

OTHERS

FSETFIT - SET FTN FIT VALUES
VFILL - FILL ARRAY WITH WORD

ARITHMETIC STATEMENT FUNCTIONS

I11FMT - FAST I-FORMAT DECODE
R11FMT - FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)

AUTHORS

ANDY SCHNEIDER - DTNSRDC CODE 1892.3
DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 1974

DATE(S) REVISED

09/20/76

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 CATEGORY: 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,.... (INPJT 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: 310008

FL NEEDED TO RUN : 210008

INPUT/OUTPUT UNITS

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

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	FILESQ	GET	IFETCH	OPENM
PUT	REMARK	REWNO	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 'HEXDMP'

PURPOSE

DUMP 9-TRACK TAPE IN HEXADECIMAL FORMAT

FUNCTIONAL CATEGORY: 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: 300008
FL NEEDED TO RUN : 200008
(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 CATEGORY: 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 CSYSUTILITYPL; 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 CATEGORY: Q0

REMARKS

NONE

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

LVLEOR - GET EOR LEVEL FROM FIT

SETREW - DECODE REWIND OPTION

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

INPUT/OUTPUT UNITS

UNIT #	LFN	USE
	TAPE1	INPUT FILE
	OUTPUT	LISTABLE OUTPUT

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LOSET,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.

FL NEEDED TO LOAD: 27000B

FL NEEDED TO RUN : 17000B

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

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CLIB

OBJECT

EDITLTB 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 CATEGORY: 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			USE
UNIT #	LFN		
-----	-----	-----	-----
	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

LOCATION OF DECKS

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

PROGRAM 'LISTBIN'

PURPOSE

LIST RELOCATABLE BINARY MODULES IN ONE OR MORE FILES

FUNCTIONAL CATEGORY: 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			
IFMTV	- FAST I-FORMAT DECODE			
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 L71FMT

FAST R-FORMAT DECODE (RIGHT-ADJ, ZERO-FILLED)
R13FMT R14FMT R21FMT R23FMT R35FMT
R33FMT 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

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=XYY.

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 CATEGORY: 01

REMARKS

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

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	CONNEX	FILESQ	GET	IFETCH
OPENM	RECOVR	REMARK	SHIFT	

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - GET ACTUAL LOCAL FILE NAMES
MSETFIT - 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

LISTEOI,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

LISTEOI,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 'LISTZ'

PURPOSE

LIST ZERO BYTE TERMINATED RECORDS (UP TO 110 CHARACTERS PER RECORD) WITH RECORD NUMBER AND RECORD LENGTHS

FUNCTIONAL CATEGORY: 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.

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)

(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)

DEFAULT EXECUTE CARD

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

FL NEEDED TO LOAD: 30000B

FL NEEDED TO RUN : 20000B

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

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CLOSEM	DATE	FILESQ	GET	IFETCH
MAXD	OPENM	RECOVR	REMARK	TIME

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

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

ARITHMETIC STATEMENT FUNCTIONS

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

AUTHOR

DAVID V SOMMER - DTNSROC 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 I3
 05/06/77 - ADD DAYFILE MESSAGE WITH # LINES AND LONGEST LINE

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYL, 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 CATEGORY: 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
MAX0	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 - DTNSROC 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

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

AD-A045 837

DAVID W TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CE--ETC F/G 9/2
COMPUTER CENTER LIBRARIES/UTILITY (PROGRAMS), (U)
SEP 77 D V SOMMER

UNCLASSIFIED

CMLD-77-17

NL

2 of 2
ADA045837



END
DATE
FILMED
11-77
DDC

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 CATEGORY: 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.
LOSET,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 FILESO GET IFETCH OPENM
RECOVR REMARK SHIFT

PART OF PROGRAM
EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS
GETLFS - 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 W SOMMER - DTNSROC CODE 1992.2

DATE WRITTEN: 08/15/75

DATE(S) REVISED

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

LOCATION OF DECKS

SOURCE
UPDATE LIBRARY: UTILITYPL, ID=GSYS
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 CATEGORY: 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)
LOSET,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

B - 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 - DTNSROC 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,IO=CLIB

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'LIST4'

PURPOSE

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

FUNCTIONAL CATEGORY: 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)

LOSET,LIB=UTILITY.

LIST4.

FROM TTY

ATTACH,UTILITY.

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

LIBRARY,UTILITY.

LIST4,,OUT.

ROUTE,OUT,OC=PR,....

EXECUTE CARD PARAMETERS

LIST4,INFILE,OUTPUT,REW.

INFILE - INPUT FILE TO BE LISTED

OUTPUT - LISTABLE OUTPJT

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,IO=CLIB

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'MANYDOC'

PURPOSE

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

FUNCTIONAL CATEGORY: 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.
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 REMOVED)
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.

DEFAULT EXECUTE CARD
MANYDOC,*,*---*,INPUT,TAPE1,LEFT,OUTPUT,ZZDOC.

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

DOCUMENTATION FILE EMPTY
FILE WAS FOUND BUT CONTAINED NO INFORMATION
DOCUMENTATION 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
ISUMIT - SUM INTEGER ARRAY
LASTC - FIND LAST NON-BLANK
MOVSTR - MOVE CHARACTER STRING
PAKLFT - SQUEEZE LEFT AND REMOVE BLANKS
PUTCHA - INSERT CHARACTER
REDUCE - ADJUST CORE UP AND DOWN
REQUEST - CALLABLE REQUEST
VFILL - FILL ARRAY WITH WORD
ZPFUNG - 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

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'MPSCM'

PURPOSE

CONVERT PRINTED OUTPUT DATA INTO A COM FORMATTED TAPE TO
PRODUCE MICROFICHE ON THE DATAGRAPHIX 4530 SYSTEM

FUNCTIONAL CATEGORY: JO

REMARKS

NONE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

NONE

PART OF PROGRAM

SHUFL

OTHERS

NONE

LANGUAGE: COBOL

INPUT/OUTPUT UNITS

LFN

USE

TAPE03 MPS INPUT FILE (NAME MUST BE TAPE03)
(MAY BE DISK OR MAGNETIC TAPE)
TAPE04 MPS OUTPUT FILE (NAME MUST BE TAPE04)

EXECUTION

FROM BATCH

CXXX,CM55000,MT1.

CHARGE,CXXX,JJJJJJJJJJ.

ATTACH,TAPE03,PFN,ID=CXXX.

VSN,TAPE04=CBXXXX.

LABEL,TAPE04,L=COMOUT,D=HY,F=S,RING,R.

BEGIN,UTILITY,,MPSCM.

* 7/8/9 EOR

(MPS INPUT DATA CARDS)

" 6/7/8/9 EOF

FROM TTY

NOT DESIGNED FOR TTY USE

FL NEEDED TO LOAD: 55000B

FL NEEDED TO RUN : 55000B

DATA CARDS

\$MODEA----- REQUEST FORMS FLASH, CHARACTER POLARITY, INDEX STATUS

\$MODEN----- SET UP MAX LINES PER PAGE, FIRST LINE OF OUTPUT FRAME, FICHE SEQUENCE NUMBER, FRAMES PER ROW, FRAMES PER COLUMN, GRID INSERT LINE, MAX OUTPUT LINE LENGTH

\$TITLS----- SEGMENT EYE-READABLE TITLE (MAX 4)

\$TITLB----- DEFINE LITERAL TO BE PRINTED IN EYE-READABLE TITLE

\$TITLK----- DEFINE EXTRACTED DATA FIELDS TO BE PLACED IN EYE-READABLE TITLE

\$INDX1----- DEFINE FIELD TO BE EXTRACTED FOR INDEX

\$LASTX1----- DEFINE FIELD TO BE EXTRACTED FOR LAST INDEX

\$BREAK----- SEQUENCE NUMBER OF ALL FICHE SINCE THE LAST FICHE BREAK

\$DATA1----- DEFINE FIELD TO BE EXTRACTED FOR DATA1

\$TRANS----- DATA CONTAINS COLONS

\$END ----- END OF INPUT

THE SYSTEM DATE MAY BE PRINTED IN THE EYE-READABLE TITLE BY REQUESTING KLLNNN BEGINNING IN COL 68 ON THE TITLK CARD.

DATA CARD COLUMNS

1...5...10...15...20...25...30...35...40...45...50...55...60
 ...65...70...75...80

\$MODEA MMA MMA MMA MMA

\$MODEN MMNNNN MMNNNN MMNNNN MMNNNN MMNNNN MMNNNN MMNNNN
 N MMNNNN

\$TITLS NNLLLL NNLLLL NNLLLL NNLLLL

\$TITLB NNLLLL "LITERAL DATA"

\$TITLK KLLNNN KLLNNN KLLNNN KLLNNN KLLNNN KLLNNN KLLNNN
 NN

\$INDX1 FF LL NNPPPP MMSSSS CCCC-----CCCC
 (LASTX,BREAK,DATA SAME FORMAT AS INDX)

FOR DESCRIPTION OF VARIOUS PARAMETERS SEE: "COMPUTER OUTPUT MICROFICHE REFERENCE MANUAL", CMD-16-76.

AUTHORS

STROMBERG DATAGRAPHICS, INC.
 BARBARA J DAVIS - DTNSRDC CODE 1892.1

DATE WRITTEN: JULY 1976

DATE(S) REVISED

07/ /76 - SEVERAL MODIFICATIONS
 08/02/76

LOCATION OF DECKS

SOURCE
 CODE 1892.1

OBJECT
 EDITLIB USER LIBRARY: UTILITY

PROGRAM 'MTDOC'

PURPOSE

CREATE DOCUMENTATION TO DESCRIBE THE CONTENTS OF A MAGNETIC TAPE

FUNCTIONAL CATEGORY: 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 CONNED 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 DESIRE
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 FTN 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	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,,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 Y/000
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 '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)
LOSET, 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 PROGR
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

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 CATEGORY: 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 008 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	DOCMT	CREATED DOCUMENTS (ON PF SPACE)
5	ZZTTO	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,DOCMT,.... AND/OR MODIFY USING EDITOR

EXECUTE CARD PARAMETERS

PFDOC,DOCMT,QUICK.

DOCMT - 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,DOCMT.

FL NEEDED TO LOAD: 370008

FL NEEDED TO RUN : 300008

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 DOCUMENTATION FILE

FUNCTIONAL CATEGORY: Q6

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

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

EXECUTION

FROM BATCH

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

FROM TTY

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

EXECUTE CARD PARAMETERS

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

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.

DEFAULT EXECUTE CARD
PROGDOC,UTILITY,*---*,NONE,OUTPUT,LEFT,TAPE1,ZZDOC.

DEFAULT PL: 15000 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
7-14	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 (TO ALLOW DOCUMENTATION TO BE PRINTED AT ALL TERMINALS, AVOID THE MINUS (-) CARRIAGE CONTROL)
2-80	LINE OF DOCUMENT

INPUT/OUTPUT UNIT #	UNITS LFN	USE
1	ZZDOC	LISTABLE OUTPUT PERMANENT RECORD OF REQUEST (ATTACHED AND RETURNED WITHIN PROGRAM) 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	FILESQ	GET	IFETCH
OPENM	OR	PUT	RECOVR	REMARK
SHIFT	STOREF			

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

- CPU467 - GET MACHINE PROGRAM IS RUNNING ON
- GETLFNS - GET ACTUAL LOCAL FILE NAMES
- LASTC - FIND LAST NON-BLANK/NON-00B CHARACTER
- MOVSTR - MOVE CHARACTER STRING
- PAKLFT - SQUEEZE BLANKS AND ZEROS OUT OF PFN
- REPLAC - REPLACE ONE CHARACTER WITH ANOTHER
- REQUEST - REQUEST,ZRECORD,*PF.
- UNLOAD - RETURN,TAPE1.
- ZPFUNG - 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

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 SCOPE LOGICAL RECORD

FUNCTIONAL CATEGORIES: Q7 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, J, 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
FILES0	GET	IFETCH	LENGTH	MOD
MOVLFW	OPENM	RECOVR	REMARK	TIME

PART OF PROGRAM

- ADD - ADD A PROCEDURE
- COPY - COPY PROCEDURES
- DELETE - DELETE A PROCEDURE
- EOJ - ABNORMAL TERMINATION ROUTINE
- 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
- PRDEL - 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

- EXTRM - EXTRACT NEXT PARAMETER FROM STRING
- FSEFIT - SET FTN FIT VALUES
- GETLFNS - GET ACTUAL LOCAL FILE NAMES
- 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	L81FMT
L91FMT				

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

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL,ID=CSYS

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
--	--------	-----------------

	TAPE1	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 'PTIM'

PURPOSE

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

FUNCTIONAL CATEGORY: Q0

REMARKS

OUTPUT FILE WILL BE CONNECTED.

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

CONNED

OTHERS

ALTIME - OBTAIN TIMES

LANGUAGE: FORTRAN IV

OUTPUT UNITS

UNIT--#	--LEN--	-----USE-----
	OUTPUT	LISTABLE OUTPUT

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LOSET,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: 220008

FL NEEDED TO RUN : 130008

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	RECOVR
REMARK	SHIFT	TIME		

PART OF PROGRAM

EOJ - ABNORMAL TERMINATION ROUTINE

OTHERS

GETLFNS - 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: 310008

FL NEEDED TO RUN : 210008

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 CATEGORY: 07

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
U N I T NAME

USE

TAPE1 INPUT COMPILE FILE
TAPE2 OUTPUT SOURCE FILE
OUTPUT LISTABLE OUTPUT (DECK NAMES)
DAYFILE TOTAL NUMBER OF DECKS

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: 270008

(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 CATEGORY: 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
SSORFL - 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	SOURCE FILE FROM 'UPDATE,P,F,S.'
7	TAPE7	WILL CONTAIN '**MOVE' DIRECTIVES (TO BE USED AS INPUT TO 'UPDATE')
	OUTPUT	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=XYX.

EXECUTE CARD PARAMETERS

SORTUP,INFILE,MOVEDIR,OUTPJT.
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 *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=SLOTXX=EXTID.
REQUEST,DTAPE,HY,NORING.
ATTACH,UTILITY.
LOSET,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=OTAPE.
- 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.

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--#	--LEN--	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 CATEGORY: Q6

LANGUAGE: FORTRAN IV

REMARKS

INFORMATION IS EXTRACTED FROM A FILE OF DOCUMENTS WHICH ARE IN THE FORMAT GENERATED BY PROGRAM 'MTOOC' 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
1	OUTPUT ZZOOC	LISTABLE OUTPUT DOCUMENTATION FILE (ATTACHED AND RETURNED BY PROGRAM)

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

DATE	EOF	MINO	MOD	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, ZZDCC.
VFILL - FILL ARRAY WITH WORD
ZPFUNC - ATTACH, ZZDCC, 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 A DOCUMENT BY PROGRAM
'DOCIT'

FUNCTIONAL CATEGORY: Q6

LANGUAGE: FORTRAN IV EXTENDED

REMARKS

NONE

EXECUTION

FROM BATCH
NOT DESIGNED FOR BATCH USE

FROM TTY

CONNECT,OUTPUT
ATTACH,UTILITY.
LIBRARY,UTILITY.
PROGDOC,MYLIB,CXXX,PROG,OLD.
(GET EXISTING DOCUMENT 'PROG' FROM DOCUMENT FILE
HAVING PFN=MYLIBDOCUMENTATION, ID=CXXX, 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
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,CXXX,PROG,,FILE,AC,PW1,PW2.
(REPLACE DOCUMENT 'PROG' ON FILE HAVING
PFN=MYLIBDOCUMENTATION, ID=CXXX. SUPPLY AC, PW1,
PW2, 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.

FL NEEDED TO LOAD: 330008

FL NEEDED TO RUN : 230008

(PROGRAM ADJUSTS CORE AS REQUIRED)

INPUT/OUTPUT UNITS		USE
UNIT #	LFN	
	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 COLUMNS 4 AND 7, 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	PUT	REMARK	

PART OF PROGRAM

UNDO - REMOVE BOTTOM OF PAGE AND OUTPUT THE PAGE

OTHERS

EQU60 - COMPARE TWO ARRAYS
 GETLFNS - GET ACTUAL LOCAL FILE NAMES
 LASTC - FIND LAST NON-BLANK IN ARRAY
 REDUCE - GET MORE CORE AS REQUIRED
 REQUEST - REQUEST, TAPE2, *PF.

ARITHMETIC STATEMENT FUNCTIONS

FAST L-FORMAT DECODE (LEFT-ADJ, ZERO-FILLED)
 L11FMT L12FMT L71FMT

AUTHOR

DAVID V SOMMER - DTNSRDC CODE 1892.2

DATE WRITTEN: 10/28/76

DATE(S) REVISED

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 CATEGORY: 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--#	--LEN--	-----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 TELETYPE USER WHICH MAINFRAME HE IS USING

FUNCTIONAL CATEGORY: Q0

LANGUAGE: CDC 6000 CP COMPASS

REMARKS

NONE

EXECUTION

FROM BATCH

ATTACH,UTILITY.

LOSET,LIB=UTILITY. OR

LIBRARY,UTILITY.

WHICHMF.

FROM TTY

BEGIN,UTILITY,,WHICHMF.

EXECUTE CARD PARAMETERS

WHICHMF.

DEFAULT EXECUTE CARD

WHICHMF.

FL NEEDED TO LOAD: 11000B

FL NEEDED TO RUN : 300B

OUTPUT UNITS

LFN

USE

DAYFILE MAINFRAME MESSAGE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

NONE

OTHERS

MACHINE - GET BATCH USER DAYFILE HEADING

AUTHOR

DAVID V SOMMER - DTNSROC 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

LOCATION OF DECKS

SOURCE

UPDATE LIBRARY: UTILITYPL, ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

PROGRAM 'WHICHOS'

PURPOSE

TELL TELETYPE USER WHICH OPERATING SYSTEM HE IS USING

FUNCTIONAL CATEGORY: Q0

REMARKS

NONE

SUBROUTINE AND FUNCTION SUBPROGRAMS REQUIRED

PART OF LANGUAGE

NONE

OTHERS

MACHINE - GET BATCH USER DAYFILE HEADING

LANGUAGE: CDC 6000 COMPASS

EXECUTION

FROM BATCH AND TTY
ATTACH,UTILITY.
LIBRARY,UTILTTY.
WHICHOS.

DEFAULT EXECUTE CARD

WHICHOS.

FL NEEDED TO LOAD: 20000B

AUTHOR

DAVID V SOMMER - NSRDC CODE 1892.2

DATE WRITTEN: 04/18/75

DATE(S) REVISED

LOCATION OF DECKS

SOURCE

TAPE LABELLED CSYSUTILITYPL; P.F. UTILITYPL,ID=CSYS

OBJECT

EDITLIB USER LIBRARY: UTILITY

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