B5500/B5700 SYSTEM SOFTWARE

MARK XV.3.0 SYSTEM RELEASE

THE MARK XV.3.0 SYSTEM RELEASE CONSISTS OF IMPROVEMENTS AND REFINEMENTS WHICH ENHANCE AND/OR CORRECT THE B5700 PROGRAMMING SYSTEMS.

THIS RELEASE CONSISTS OF THREE REELS OF MAGNETIC TAPE WHICH CONTAIN:

1. SYMBOLIC FILES OF ALL MARK XV.3.0 SOFTWARE
2. OBJECT CODE VERSIONS OF ALL MARK XV.3.0 SOFTWARE
3. PATCHES FROM MARK XV.2.0 TO MARK XV.3.0
4. TEMPORARY PATCHES APPLICABLE TO THE MARK XV.3.0 SYSTEM
5. PRINTER BACK-UP DISK FILES OF:
   A. THIS SYSTEM NOTE
   B. ONE APPENDIX TO THIS SYSTEM NOTE

NOTE: THE PATCHES WHICH WERE USED TO CREATE THE MARK XV.3.0 SYMBOLICS ARE INCLUDED IN THIS RELEASE FOR DOCUMENTATION PURPOSES ONLY.

THERE ARE SEVERAL NEW FEATURES IN THIS RELEASE. THESE INCLUDE:

1. PROCEDURE DIRECTORYSEARCH HAS BEEN REDUCED IN SIZE AND CALLS ON PROCEDURE DIRECTORYSEARCH HAVE BEEN CHANGED.

2. NEW COMPILE-TIME OPTIONS, AUTODUMP AND NEWLOGGING FOR THE DCMCP AND TSSMCP; AND A NEW SPO OPTION, HALT, FOR THE DCMCP.

3. "SA" KEYIN FOR SEGMENT AND ADDRESS.

4. REORGANIZATION AND/OR BREAKDOWN OF THE FOLLOWING PROCEDURES INTO SMALLER PROCEDURES IN AN EFFORT TO REDUCE CORE USAGE:

   A. PROCEDURE COMMUNICATE

   B. PROCEDURE SHORTCOMMUNICATE

   C. PROCEDURE SELECTION

   D. PROCEDURE OTHERFILEOPEN

   E. PROCEDURE INDIANBOY

5. ADDITION OF PROCEDURE ENTERSYSFILE TO CREATE "LIBMAIN/DISK", "PRNPBT/DISK", AND "LDCNTRL/DISK".

6. B5700 JOB MANAGEMENT WORKING SET, SEE APPENDIX A.

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SYMBOL1/FILE000

THE "SYMBOL1/FILE000" TAPE IS A LIBRARY MAINTENANCE FORMAT "DUMP" TAPE WHICH CONTAINS THE FOLLOWING SYMBOLIC FILES:

FILE NAME	DESCRIPTION
SYMBOL/MCP	ESPOL SYMBOLIC ** DATACOM MCP
SYMBOL/TSSMCP	ESPOL SYMBOLIC ** TIME-SHARING MCP
SYMBOL/INTRINS	ESPOL SYMBOLIC ** SYSTEM INTRINSICS MCP
SYMBOL/ALGOL	ALGOL SYMBOLIC ** ALGOL AND TSPOL COMPILERS
SYMBOL/COBOL	ALGOL SYMBOLIC ** COBOL COMPILER
SYMBOL/COBOL68	ALGOL SYMBOLIC ** COBOL68 COMPILER
SYMBOL/ESPOL	ALGOL SYMBOLIC ** ESPOL COMPILER
SYMBOL/FORTRAN	ALGOL SYMBOLIC ** FORTRAN COMPILER
SYMBOL/XALGOL	ALGOL SYMBOLIC ** XALGOL COMPILER

SYMBOL2/FILE000

THE "SYMBOL2/FILE000" TAPE IS A LIBRARY MAINTENANCE FORMAT "DUMP" TAPE WHICH CONTAINS THE FOLLOWING SYMBOLIC FILES:

FILE NAME	DESCRIPTION
SYMBOL/BASIC	ALGOL SYMBOLIC ** BASIC COMPILER
SYMBOL/AFILTER	ALGOL SYMBOLIC ** ALGOL FILTER PROGRAM
SYMBOL/AUXDATA	ALGOL SYMBOLIC ** AUXDATA/MAKER
SYMBOL/AUXTST	ESPOL SYMBOLIC ** AUXILIARY MEMORY TEST
SYMBOL/CHECKAL	ALGOL SYMBOLIC ** CHECKAL/TEST
SYMBOL/COOL	ESPOL SYMBOLIC ** COOL AND COLD START ROUTINES
SYMBOL/DC1000	ALGOL SYMBOLIC ** DC1000/CODEGEN
SYMBOL/DCFILL	ALGOL SYMBOLIC ** DCFILL/PRT
SYMBOL/DSKDSK	ESPOL SYMBOLIC ** DISK TO DISK LOADER
SYMBOL/DUMPANL	ALGOL SYMBOLIC ** DUMP/ANALYZE
SYMBOL/KERNEL	ESPOL SYMBOLIC ** HALT LOAD KERNEL ROUTINE
SYMBOL/LOGAN	ALGOL SYMBOLIC ** LOGAN/DISK
SYMBOL/LOGOUT	ALGOL SYMBOLIC ** LOGOUT/DISK
SYMBOL/LOGOUTR	ALGOL SYMBOLIC ** LOGOUTR/DISK
SYMBOL/MAKCAST	ALGOL SYMBOLIC ** MAKCAST/DISK
SYMBOL/MASTEST	COBOL SYMBOLIC ** MASTER/TEST
SYMBOL/MEMDUMP	ESPOL SYMBOLIC ** MEMORY DUMP ROUTINE
SYMBOL/MESSGEN	ALGOL SYMBOLIC ** SYSTEM/MESSGEN
SYMBOL/MLOGAN	ALGOL SYMBOLIC ** LOGANL/MAINT
SYMBOL/OLMAINT	TSPOL SYMBOLIC ** ONLINE/MAINT
SYMBOL/PMERGE	XALGOL SYMBOLIC ** PATCH/MERGE
SYMBOL/ROTO	ALGOL SYMBOLIC ** ROTO/ROOTER
SYMBOL/STATS1	ALGOL SYMBOLIC ** STATS1/ANALYZE
SYMBOL/STATS2	ALGOL SYMBOLIC ** STATS2/ANALYZE
SYMBOL/STATS3	ALGOL SYMBOLIC ** STATS3/ANALYZE
SYMBOL/STATS4	ALGOL SYMBOLIC ** STATS4/ANALYZE
SYMBOL/SYSDISK	ALGOL SYMBOLIC ** SYSDISK/MAKER
SYMBOL/TAPEDSK	ESPOL SYMBOLIC ** TAPE TO DISK LOADER
SYMBOL/TPECNF	OLMAINT SYMBOLIC ** OTPECNF/MAINT
SYMBOL/TSDUMP	ALGOL SYMBOLIC ** TSDUMP/ANALYZE
SYMBOL/TSFILL	ALGOL SYMBOLIC ** TSFILL/PRT
SYMBOL/UPDATE	ALGOL SYMBOLIC ** UPDATE/USERS
SYMBOL/CANDE	TSPOL SYMBOLIC ** CANDE/TSHARER
SYMBOL/APPEND	TSPOL SYMBOLIC ** APPEND/CANDE
SYMBOL/COPY	TSPOL SYMBOLIC ** COPY/CANDE
SYMBOL/DELETE	TSPOL SYMBOLIC ** DELETE/CANDE
SYMBOL/FIND	TSPOL SYMBOLIC ** FIND/DISK
SYMBOL/GUARD	TSPOL SYMBOLIC ** GUARD/DISK
SYMBOL/HARD	TSPOL SYMBOLIC ** HARD/CANDE

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SYMBOL/HELP      TSPOL SYMBOLIC ** HELP/DISK
SYMBOL/LFILES    TSPOL SYMBOLIC ** LFILES/CANDE
SYMBOL/LIST      TSPOL SYMBOLIC ** LIST/CANDE
SYMBOL/LOAD      TSPOL SYMBOLIC ** LOAD/CANDE
SYMBOL/MERG      TSPOL SYMBOLIC ** MERGE/CANDE
SYMBOL/PAPER     TSPOL SYMBOLIC ** PAPER/CANDE
SYMBOL/PUNCH     TSPOL SYMBOLIC ** PUNCH/CANDE
SYMBOL/QUIKLST   TSPOL SYMBOLIC ** QUIKLST/CANDE
SYMBOL/REPLACE   TSPOL SYMBOLIC ** REPLACE/CANDE
SYMBOL/RESEQ     TSPOL SYMBOLIC ** RESEQ/CANDE
SYMBOL/RESEQB    TSPOL SYMBOLIC ** RESEQB/CANDE
SYMBOL/SCHEDUL   TSPOL SYMBOLIC ** SCHEDUL/CANDE
SYMBOL/USER      ALGOL SYMBOLIC ** USER/CANDE
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SYSTEM/FILE000

THE FOLLOWING IS A LIST OF THE OBJECT CODE AND DATA FILES LOCATED ON THE TAPE LABELED "SYSTEM/FILE000":

MCP RELATED FILES

FILE NAME	DESCRIPTION
MCP/DISK	DATACOM MCP OBJECT CODE FILE
MCPA/DISK	DATACOM MCP OBJECT CODE FILE
MCP/STUFF	DATA MCP "STUFF" FILE
MCP/PRT	DATACOM MCP "PRT" FILE
DC/AUXMCP	DATACOM MCP AUXILIARY MEMORY FILE
INT/DISK	DATACOM INTRINSICS OBJECT CODE FILE
INT/STUFF	DATACOM INTRINSICS "STUFF" FILE
DC/AUXINT	DATACOM INTRINSICS AUXILIARY MEMORY FILE
TSS/MCP	TIME-SHARING OBJECT CODE FILE
TSS/MCPA	TIME-SHARING OBJECT CODE FILE
TSSMCP/STUFF	TIME-SHARING "STUFF" FILE
TSS/PRT	TIME-SHARING "PRT" FILE
TSS/AUXMCP	TIME-SHARING AUXILIARY MEMORY FILE
TSS/INT	TIME-SHARING INTRINSICS OBJECT CODE FILE
TSSINT/STUFF	TIME-SHARING INTRINSICS "STUFF" FILE
TSS/AUXINT	TIME-SHARING INTRINSICS AUXILIARY MEMORY FILE

COMPILER RELATED FILES

FILE NAME	DESCRIPTION
AFILTER/DISK	ALGOL FILTER PROGRAM
ALGOL/DISK	ALGOL COMPILER
BASIC/DISK	BASIC COMPILER
COBOL/DISK	COBOL COMPILER
COBOL68/DISK	COBOL68 COMPILER
ESPOL/DISK	ESPOL COMPILER
FORTRAN/DISK	FORTRAN COMPILER
MAKCAST/DISK	SYMBOLIC LIBRARY MAINTENANCE PROGRAM
TSPOL/DISK	TSPOL COMPILER
XALGOL/DISK	XALGOL COMPILER

CANDE RELATED FILES

FILE NAME	DESCRIPTION
CANDE/TSHARER	CANDE COMMAND AND EDIT PROGRAM
APPEND/CANDE	CANDE PROGRAM FOR APPEND VERB
COPY/CANDE	CANDE PROGRAM FOR COPY VERB
DELETE/CANDE	CANDE PROGRAM FOR DELETE VERB
FIND/DISK	CANDE PROGRAM FOR FIND VERB
GUARD/DISK	CANDE PROGRAM FOR GUARD VERB
HARD/CANDE	CANDE FILE MAINTENANCE PROGRAM
HELP/DISK	CANDE DISK FILE ERROR RECOVERY PROGRAM
LFILES/CANDE	CANDE PROGRAM FOR LFILES VERB
LIST/CANDE	CANDE PROGRAM FOR LIST VERB
LOAD/CANDE	CANDE PROGRAM FOR LOAD VERB
MERGE/CANDE	CANDE PROGRAM FOR MERGE VERB
MESAGE/CANDE	CANDE ERROR MESSAGE FILE
PAPER/CANDE	CANDE PROGRAM FOR PAPER VERB
PUNCH/CANDE	CANDE PROGRAM FOR PUNCH VERB
QUIKLST/CANDE	CANDE PROGRAM FOR QUIKLST VERB
REPLACE/CANDE	CANDE PROGRAM FOR REPLACE VERB
RESEQ/CANDE	CANDE PROGRAM FOR RESEQ VERB
RESEQB/CANDE	CANDE PROGRAM FOR RESEQB VERB
SCHEDUL/CANDE	CANDE PROGRAM FOR SCHEDUL VERB

SYSTEM UTILITY FILES

FILE NAME	DESCRIPTION
USER/CANDE	UPDATES "USERS/CANDE"
UPDATE/USERS	UPDATES "REMOTE/USERS"
PATCH/MERGE	PATCH MAINTENANCE PROGRAM
SYSDISK/MAKER	AUXILIARY MEMORY FILE MAINTENANCE PROGRAM
AUXDATA/MAKER	AUXILIARY MEMORY FILE MAINTENANCE PROGRAM
SYSTEM/MESSGEN	CREATES "MESSAGE/OTHEDAY"
DC1000/CODEGEN	GENERATES DC1000 R.J.E. CODE DECK

ANALYSIS RELATED FILES

FILE NAME	DESCRIPTION
ROTO/ROOTER	"SEPTIC" FILE ANALYZER
STATS1/ANALYZE	ANALYZER FOR TIME-SHARING STATISTICS FILE
STATS2/ANALYZE	ANALYZER FOR TIME-SHARING LOG
STATS3/ANALYZE	ANALYZER FOR DATACOM MCP STATISTICS FILE
STATS4/ANALYZE	ANALYZER FOR DATACOM MCP SYSTEM LOG
ONLINE/MAINT	ON-LINE MAINTENANCE PROGRAM
OTPECNF/MAINT	SET OF ON-LINE TAPE CONFIDENCE ROUTINES
LOGAN/DISK	TIME-SHARING LOG ANALYZER
LOGANL/MAINT	MAINTENANCE LOG ANALYZER
LOGOUT/DISK	DATACOM MCP SYSTEM LOG ANALYZER
LOGOUTR/DISK	DATACOM MCP REMOTE LOG ANALYZER
DCFILL/PRT	CREATES "MCP/PRT"
DUMP/ANALYZE	DATACOM MCP MEMORY DUMP ANALYZER
TSFILL/PRT	CREATES "TSS/PRT"
TSDUMP/ANALYZE	TIME-SHARING MCP MEMORY DUMP ANALYZER

PUNCH BACK-UP FILES OF "CARD LOAD SELECT" PROGRAMS

FILE NAME	DESCRIPTION
PUD/COLD	COLD START PROGRAM
PUD/COOL	COOL START PROGRAM
PUD/KERNEL	HALT LOAD KERNEL ROUTINE
PUD/MEMDUMP	MEMORY DUMP ROUTINE
PUD/DSKDSK	DISK TO DISK PROGRAM
PUD/TAPEDSK	TAPE TO DISK PROGRAM
PUD/AUXTST	AUXILIARY MEMORY TEST

GENERAL UTILITY FILES

FILE NAME	DESCRIPTION
CHECKAL/TEST	ALGOL MASTER TEST PROGRAM
MASTER/TEST	COBOL MASTER TEST PROGRAM
TAPE/COMPARE	TAPE COMPARISON PROGRAM
TAPCOPY/DISK	TAPE COPY AND COMPARISON PROGRAM
DSKDUMP/UTILITY	LISTS DISK AREAS BY ADDRESS
HDRLST/UTILITY	LISTS DISK DIRECTORY HEADERS BY NAME
LIBLST/UTILITY	LIST SYMBOLIC FILES ON "LIBRARY DUMP" TAPES
XREF/JONES	CROSS REFERENCE AND DOCUMENT EDITING PROGRAM

PATCHES TO MARK XV.2.0

FILE NAME
MARKXV3/LOGAN
MARKXV3/CANDE
MARKXV3/ALGOL
MARKXV3/PAPER
MARKXV3/MCP
MARKXV3/TSSMCP
MARKXV3/LOGOUT
MARKXV3/MLOGAN
MARKXV3/BASIC
MARKXV3/COOL
MARKXV3/ESPOL
MARKXV3/PMERGE
MARKXV3/COBOL
MARKXV3/FORTRAN
MARKXV3/OLMAINT
MARKXV3/INTRINS
MARKXV3/XALGOL
MARKXV3/COBOL68
MARKXV3/ROTO

TEMPORARY PATCHES TO MARK XV.3.0

FILE NAME
PATCH/MCP
PATCH/TSSMCP
PATCH/INITRINS
PATCH/BASIC
PATCH/COBOL
PATCH/COBOL68
PATCH/FORTRAN
PATCH/CANDE
PATCH/COOL
PATCH/TSFILL
PATCH/TSDUMP
PATCH/DCFILL
PATCH/DUMPANL
PATCH/ROTO

PRINTER BACK-UP FILES

FILE NAME	DESCRIPTION
PBD/SYSNOTE	SYSTEM NOTE
PBD/APPX	APPENDIX

CUMULATIVE DOCUMENTATION REFERENCE

APPENDICES TO SYSTEM NOTES

1 (XI.0)	A	FILE ATTRIBUTES
	B	FILE PARAMETER BLOCK LAYOUT
	C	DISK ORGANIZATION
	D	I/O ERROR MESSAGES
	E	COLD AND COOL START DECK CONSTRUCTION
	F	SYSTEM MEASUREMENT FACILITIES (STATISTICS COMPILE TIME OPTION)
	G	TAPCOPY/DISK OPERATING INSTRUCTIONS
4 (XII.0)	A	RESOURCE ALLOCATION AND AUXMEM
	B	CHANGES AND ADDITIONS TO CANDE VERBS
	C	EXTENDED DATACOM FOR TIME SHARING
	D	USE OF THE B9352 WITH TIME SHARING
	E	USE OF THE TC500 WITH TIME SHARING
5 (XII.24)	A	NEW CANDE FEATURES
	B	ON-LINE MAINTENANCE MANUAL
6 (XII.98)	A	PUNCH BACK-UP FACILITY
	B	PATCH/MERGE USERS GUIDE
7 (XIII.0)	A	REMOTE JOB ENTRY
	B	ON-LINE MAINTENANCE TAPE ROUTINES
9 (XIII.69)	A	ALGOL/XALGOL DOLLAR CARD SYNTAX
	B	COBOL FILE ATTRIBUTES
	C	COBOL68 INTER-PROGRAM COMMUNICATION
	D	FORTRAN DOLLAR CARD SYNTAX
	E	MAINTENANCE LOG MANUAL
	F	ONLINE/MAINT - SIMPL MANUAL
10 (XIV.0)	A	REAL-TIME TAPE TEST FACILITY
	B	DCMCP PACKETS OPTION
	C	COBOL68 FILE ATTRIBUTES
	D	AUXMEM ON TIME SHARING
	E	MULTI-REEL LIBRARY TAPES
	F	TC500/CANDE INTERFACE PROGRAM
	G	B9353 WITH TIME SHARING
	H	ONLINE/MAINT CHANGES
	I	SUPPLEMENT TO SIMPL
	J	COBOL68 EVENTS AND INTERRUPTS
	K	FORTRAN FORMAT IMPROVEMENTS
11 (XV.1.0)	A	ESPOL COMPILER CONTROL CARDS
	B	AUXILIARY MEMORY DESCRIPTION
	C	"PACKETS" FOR TSSMCP

	D	AUXILIARY MEMORY TEST FACILITY
	E	DISKSQUASH FACILITY
	F	CHANGES TO "UPDATE/USERS"
	G	THE DATA COMM TRACKING FACILITY
	H	DIRECTORY INTERLOCKING DESCRIPTION
	I	REVISED HANDLING OF DISK ERRORS
	J	PBD/PUD RECOVERY AFTER A HALT/LOAD
	K	MEMORY DUMP CHANGES
	L	DISK SPEED AND/OR EU ATTRIBUTES
	M	"XREF" AND "BEND" OPTIONS IN ALGOL
	N	ONLINE DISK CONFIDENCE TEST
	O	CANDE "HELP" ROUTINE
12 (XV,2,0)	A	THE SENSITIVE ATTRIBUTE
	B	NEW COOL/COLD START FEATURES
	C	NO MEM AIDS
	D	AUXMEM RECOVERY
	E	RECORD LEVEL LOCKOUT
	F	PRINTER BACK-UP MODIFICATIONS

MANUALS IN PBD FORMAT ON SOFTWARE RELEASES

RELEASE	MANUAL
MARK XIII SYSTEM RELEASE (MARK XIII.0 MCP)	TIME SHARING SYSTEM REFERENCE MANUAL
MARK XIII PATCH REL. #1 (MARK XIII.69 MCP)	COBOL68 (CODASYL) MANUAL B5700 MCP REFERENCE MANUAL
MARK XV.2.0 SYSTEM RELEASE (MARK XV.2.0 MCP)	SYSTEM OPERATIONS GUIDE

TO OBTAIN ADDITIONAL DOCUMENTATION, PLEASE REFER TO THE "ELECTRONIC DATA PROCESSING (GROUP III) PRINTED MATERIALS CATALOG AND PRICE LIST" PUBLICATION NUMBER: 1047800

CHANGES TO THE MARK XV.2.0 SYSTEM

MCP CHANGES 1 THROUGH 47.

CHANGE NO. 1 (25 CARDS).

THIS CHANGE IMPROVES THE WAY DATA DECKS ARE HANDLED UNDER THE PACKET SYSTEM. TWO FEATURES ARE ADDED:

A. DATA DECKS WHICH ARE NOT PART OF A PACKET MAY BE PLACED ON DISK THROUGH THE CARD READER OR BY AN OBJECT PROGRAM ZIP.

B. PROGRAMS INITIATED FROM OTHER UNITS MAY ACCESS THESE DECKS FROM WITHIN A PACKET OR FROM OUTSIDE A PACKET.

CHANGE NO. 2 (52 CARDS).

THIS CHANGE CORRECTS SEVERAL ERRORS WHICH RENDERED THE RJE OPTION INOPERABLE. THIS CHANGE ALSO CLEANS UP SOME CODE AT THE END OF THE COM5 PROCEDURE.

CHANGE NO. 3 (25 CARDS).

WITH THIS CHANGE, ALL PSEUDO DECKS WILL BE MADE INTO PACKETS IF THE PKTONLY OPTION IS RESET.

CHANGE NO. 4 (6 CARDS).

THIS CHANGE CORRECTS AN ERROR WHICH OCCURRED WHEN ENTERING B6500 FILES WITH FILE NAMES GREATER THAN 7 CHARACTERS INTO THE DIRECTORY. PREVIOUSLY, A FILE WITH MORE THAN 7 CHARACTERS FOR THE FIRST NAME WOULD PLACE THE REMAINING CHARACTERS OF THE FIRST NAME INTO THE SECOND NAME. FOR EXAMPLE:

"EXTRALONG/FILENAME"

WOULD BE ENTERED AS

"EXTRALO/NGFILEN"

INSTEAD OF THE CORRECT NAME

"EXTRALO/FILENAM".

CHANGE NO. 5 (1 CARD).

THIS CHANGE ELIMINATES A CONTROL STATE INVALID INDEX WHICH OCCURRED WHEN CLOSING A FILE WITH CRUNCH. AS A RESULT OF THIS ERROR, THE DISK ADDRESS FOR THE FIRST ROW OF THE FILE WAS INCORRECT, CAUSING INCORRECT DATA IN THE FILE AND POSSIBLE FILE OVERLAPPING.

CHANGE NO. 6 (36 CARDS).

THIS CHANGE CORRECTS A CONDITION WHICH CAUSED EXTRA SPACE TO BE ASSIGNED TO FILES FOR WHICH THE DECLARED ROW SIZE EQUALED THE BLOCK SIZE.

CHANGE NO. 7 (2 CARDS).

THIS CHANGE CAUSES A BRANCH TO THE <ABNORMAL-CONDITIONAL LABEL> FOR A TYPE 14 DATACOM READ IF THE SPECIFIED ADAPTER IS READ-READY ABNORMAL, WRITE-READY ABNORMAL, IDLE ABNORMAL, OR NOT-READY. PREVIOUSLY, THE <NO-INPUT LABEL> WAS TAKEN.

CHANGE NO. 8 (5 CARDS).

THIS CHANGE LEAVES THE COMPILATION DATE OUT OF THE BOJ MESSAGE IF THE DATE IS ZERO. THIS AFFECTS ONLY "PRNPBT/DISK", "LIBMAIN/DISK", AND "LDCNTRL/DISK".

CHANGE NO. 9 (1 CARD).

THIS CHANGE ELIMINATES A SUPERFLUOUS LINE OF CODE IN PROCEDURE EUF (ENTERUSERFILE).

CHANGE NO. 10 (21 CARDS).

THIS CHANGE ELIMINATES A STACK OVERFLOW WHICH OCCURRED IN THE STACK USED FOR PROCEDURE NINETEEN READER. THE STACK OVERFLOW HAPPENED WHEN THE NAK COUNT WAS EXCEEDED FOR AN RJE TERMINAL. THIS ERROR WAS INTRODUCED IN THE MARK XV.2.0 RELEASE AND AFFECTED ONLY RJE SYSTEMS.

CHANGE NO. 11 (1 CARD).

THIS CHANGE CORRECTS AN ERROR WHICH CAUSED THE MESSAGE

<MFID>/<FID> NOT DUMPED (DISK PARITY)

TO BE PRINTED AT THE SPO TWICE FOR EVERY IRRECOVERABLE DISK PARITY WHICH OCCURRED IN A FILE BEING DUMPED. THE MESSAGE IS NOW PRINTED ONLY ONCE.

CHANGE NO. 12 (4 CARDS).

THIS CHANGE CAUSES THE CONTENTS OF THE STATION ARRAY TO BE SAVED IN THE SEPTIC TANK FOR EVERY I/O. IN ORDER TO ANALYZE SEPTIC TANKS CREATED UNDER THIS CHANGE, ROTO CHANGE NO. 01 MUST BE INCLUDED IN "ROTO/ROOTER".

CHANGE NO. 13 (213 CARDS).

THIS CHANGE ALTERS THE STRUCTURE OF PROCEDURE DIRECTORYSEARCH. IT ALSO CHANGES PROCEDURE CALLS ON PROCEDURE DIRECTORYSEARCH.

WHEN A CALL ON PROCEDURE DIRECTORYSEARCH CAN NOT BE COMPLETED, A VALUE OF 0, 1, 2, OR 3 WILL BE RETURNED TO THE CALLING PROCEDURE. THESE VALUES HAVE THE FOLLOWING MEANINGS:

0 = NOT ON DISK
1 = IN USE
2 = SYSTEM FILE
3 = JOB DS-ED IN FILEHOLD ROUTINE.

OPTION 19, WHEN ASSOCIATED WITH CALLS ON PROCEDURE DIRECTORYSEARCH, WILL NOW FUNCTION AS OPTION 5 (RETURN FILE HEADER) EXCEPT THAT IT LEAVES THE DIRECTORY LOCKED WHEN RETURNING TO THE CALLING PROCEDURE. IT IS THE RESPONSIBILITY OF THE CALLING PROCEDURE TO UNLOCK THE DIRECTORY AND CLEAN UP. THIS CHANGE RESULTS IN A REDUCTION IN THE SIZE OF PROCEDURE DIRECTORYSEARCH AND PLACES MORE OF THE CODE IN THE CALLING PROCEDURES.

ALL PROCEDURE CALLS ON PROCEDURE DIRECTORYSEARCH WILL EVENTUALLY RETURN TO THE CALLING PROCEDURE. THIS ENABLES THE CALLING PROCEDURE TO UPDATE THE COUNTS AND CLEAN UP AFTER A DS. PREVIOUSLY, ON THE TSSMCP, IF A PROGRAM WAS OPENED TWICE AND RECEIVED AN IN-USE

CONDITION. THE FILE WOULD STILL BE MARKED AS OPEN AFTER THE JOB WAS DS-ED. ALSO, IF A JOB IS DS-ED WHILE IN PROCEDURE FILEHOLD, IT WILL NO LONGER BRANCH TO THE INITIATION CODE IN THE OUTER BLOCK, BUT RATHER, RETURN TO THE CALLING PROCEDURE.

THIS CHANGE ALSO CORRECTS THE FOLLOWING PROBLEMS:

A. A TIMING PROBLEM WITH THE CHANGE CONTROL CARD. IF A JOB ATTEMPTED TO ACCESS A FILE UNDER ITS ORIGINAL NAME WHILE ITS NAME WAS BEING CHANGED, THE JOB WOULD BE ENTERED INTO HOLDLIST AND NEVER AWAKENED. OPTION #8 OF DIRECTORY-SEARCH, WHICH IS THE FINAL STEP IN A NAME CHANGE, CHECKS HOLDLIST SO THE JOB WILL BE AWAKENED AND A "NO FILE" CONDITION RETURNED.

B. AN INCORRECT DISK ADDRESS RETURNED BY PROCEDURE DIRECTORYSEARCH FOR A HEADER. IF A "NO USER DISK" CONDITION OCCURRED WHILE ATTEMPTING TO SECURE MORE DISK, BAD CODE IN GETAROW CAUSED A BAD ADDRESS TO BE PASSED.

C. SENSITIVE BIT NOT HANDLED PROPERLY BY THE CLOSE CODE OF PROCEDURE DIRECTORYSEARCH. PREVIOUSLY, THE DISK COPY WAS NOT ALWAYS THE SAME AS THE CORE COPY.

THIS CHANGE ALSO RENAMES "ACESBIT". ITS NEW NAME IS "CCSET". THE CODE FOR "CCSET" HAS BEEN MOVED AND PORTIONS REWRITTEN.

CHANGE NO. 14 (11 CARDS).

THIS CHANGE INSURES THAT AN INCORRECT "PB" KEYBOARD REQUEST, ENTERED AT A REMOTE TERMINAL, WILL NOT BE PRINTED AT THE SPO.

CHANGE NO. 15 (2 CARDS).

THIS CHANGE CORRECTS AN ERROR WHICH CAUSED THE

NO FIL ON DISK <MFID>/<FID>

MESSAGE TO BE OMITTED IN RESPONSE TO A "WY" KEYIN.

CHANGE NO. 16 (1 CARD).

THIS CHANGE ELIMINATES A FAULTY JAR ENTRY CAUSED BY THE HD KEYIN. WITHOUT THIS CHANGE, AN INVALID LINK MAY OCCUR.

CHANGE NO. 17 (151 CARDS).

THIS CHANGE MAKES THE FOLLOWING MODIFICATIONS TO THE PUNT ROUTINE:

1. THE MESSAGE DISPLAYED AT THE SPO IS NOW:

   *SYS HANG, F=<VALUE OF F-REGISTER>:<REASON>

   PREVIOUSLY, ONLY THE <REASON> FOR THE HANG WAS PRINTED.

2. A NEW COMPILE TIME OPTION, AUTODUMP, AND A NEW SPO OPTION, HALT, HAVE BEEN IMPLEMENTED. IF THE AUTODUMP OPTION IS INCLUDED, AND THE HALT OPTION IS RESET, THEN, AFTER PRINTING THE PUNT MESSAGE, THE MCP WILL READ THE MEMORY DUMP ROUTINE FROM DISK AND BRANCH INTO IT. AFTER THE PUNT MESSAGE IS PRINTED, THE MESSAGE

   WHICH UNIT

   WILL BE DISPLAYED, AND THE OPERATOR SHOULD RESPOND AS TO AN ORDINARY DUMP. THE MEMORY DUMP ROUTINE MUST BE PLACED ON DISK VIA A MEMDUMP CARD IN THE COLD OR COOL START ROUTINE.

   IF THE OPTION HALT IS SET, OR THE AUTODUMP OPTION IS NOT INCLUDED IN THE MCP, THE MCP WILL LOOP AFTER PRINTING THE MESSAGE.

   PREVIOUS TO THIS CHANGE, 71 WORDS OF SAVE CORE WERE USED BY THE PUNT ROUTINE. NOW 77 WORDS WILL BE USED IF THE AUTODUMP OPTION IS INCLUDED AND 50 WORDS IF IT IS NOT.

CHANGE NO. 18 (1 CARD).

THIS CHANGE ELIMINATES THE "RA" (RELATIVE ADDRESS) KEYIN AND IMPLEMENTS "SA" (SEGMENT AND ADDRESS). THE USE OF "RA" CONFLICTED WITH THE ROMIC CER WHICH ALREADY USED "RA" IN ITS MCP.

CHANGE NO. 19 (20 CARDS).

THIS CHANGE NOTIFIES THE OPERATOR IF THE SPECIFIED AUXMEM FILES ARE NOT ON DISK WHEN THE SYSTEM ATTEMPTS TO ACCESS THEM. THIS COULD HAPPEN IF THE FILES WERE REMOVED AFTER THE CA WAS DONE.

IF THE MCP AUXMEM FILE IS NOT ON DISK WHEN A H/L IS DONE, A MESSAGE OF THE FORM

<MFID>/<FID> NOT ON DISK

WILL BE PRINTED AT THE SPO AND THE OPERATOR IS THEN ASKED FOR A CA. IF

IF THE INTRINSIC FILE IS NOT ON DISK, EITHER DURING A H/L OR AFTER A CI, THE MESSAGE

<MFID>/<FID> NOT ON DISK

WILL BE PRINTED AT THE SPO. IN THIS CASE, THE MCP WILL THEN PROCEED TO LOAD THE INTRINSICS AS IF AN AUXMEM FILE HAD NOT BEEN SPECIFIED.

CHANGE NO. 20 (20 CARDS).

THIS CHANGE ELIMINATES A PROBLEM WHICH OCCURRED IF A TAPE UNIT WENT NOT READY WHILE WRITE PARITY WAS BEING ATTEMPTED ON THE FIRST BLOCK ON THE TAPE. PREVIOUSLY, THE SYSTEM APPEARED TO BE HUNG UNTIL THE TAPE UNIT WAS READIED.

CHANGE NO. 21 (2 CARDS).

THIS CHANGE CORRECTS AN ERROR WHICH CAUSED DISK I/O-S TO BE DONE TO THE WRONG CONTROL ON A SYSTEM USING DKBNODFX. THIS OCCURRED WHEN PROCESSING UPDATE OR RANDOM FILES WITH ROWS ON EACH OF THE CONTROLS.

CHANGE NO. 22 (4 CARDS).

THIS CHANGE CORRECTS AN ERROR IN THE HANDLING OF THE MCP VARIABLE IOQUESLOTS. THE PROBLEM WAS ON A SYSTEM USING DFX WHEN A DISK FILE CONTROL WENT NOT-READY. THIS CHANGE ALSO MOVES A LINE OF CODE IN PROCEDURE IOREQUEST FOR COMPATIBILITY WITH THE TSSMCP.

CHANGE NO. 23 (666 CARDS).

THIS CHANGE REORGANIZES PROCEDURE COMMUNICATE AND PROCEDURE SHORTCOMMUNICATE IN AN EFFORT TO REDUCE CORE USAGE AND TO MAKE BOTH MCP-S MORE COMPATIBLE. TWO NEW ROUTINES, PROCEDURE COMMUNICATE1 AND

PROCEDURE COMMUNICATED HAVE REPLACED PROCEDURE COMMUNICATE. NUMERICALLY, EACH OF THESE ROUTINES, INCLUDING SHORTCOMMUNICATE, NOW CONTAIN THE SAME COMMUNICATES WHERE APPLICABLE, FOR BOTH DCMCP AND TSSMCP.

IN ADDITION, THIS CHANGE ELIMINATES AN INVALID LINK WHICH RESULTED FROM THE EXECUTION OF A "CHAIN" COMMUNICATE (#37) WITH DATACOM SET. THE PROBLEM WAS THAT THE "USERSTA" ENTRY CONTAINED UNSUSPECTED DATA AT THE TIME THE CHAIN WAS USED.

CHANGE NO. 24 (264 CARDS).

THIS CHANGE IMPLEMENTS A NEW MCP COMPILE-TIME OPTION, NEWLOGGING. THIS OPTION MAKE THE PROCESSOR AND I/O TIMES CHARGED TO A PARTICULAR JOB MORE CONSISTENT. IT HAS BEEN NOTICED THAT THE TIMINGS FOR A PROGRAM VARIED (THEREFORE THE CHARGES) DEPENDING ON THE MAKEUP OF THE OTHER JOBS IN THE MIX. WHEN ONE OF THE OTHER JOBS IN THE MIX HAD A HIGH AMOUNT OF OVERLAY, THE PROCESSOR AND I/O TIMES WERE HIGHER FOR THE PROGRAM. THE INCREASE WAS DUE TO THE TIME SPENT IN THE MCP OVERHEAD BECAUSE OF THE HEAVY OVERLAYING ENVIRONMENT. THE INCREASE INCLUDED TIME SPENT IN: MAKING NON-PRESENT MCP PROCEDURES PRESENT; OVERLAYING PROGRAM AND DATA SEGMENTS TO OBTAIN AVAILABLE SPACE; HANDLING PROCESSOR INTERRUPTS; AND DOING I/O-S TO DISK FOR PROCEDURES OVERLAY AND MAKEPRESENT.

IN ORDER TO MAKE THE PROCESSOR AND I/O TIMES CHARGED TO AN OBJECT PROGRAM MORE CONSISTENT, THE CHARGES INVOLVED IN THE MCP OVERHEAD APPEAR AS A PRO-RATED TIME CHARGED TO ALL THE JOBS IN THE MIX. THIS RESULTS IN A 50% VARIANCE BEING REDUCED TO A MAXIMUM OF 5%.

THE TIMES LOGGED FOR A JOB UNDER THE NEWLOGGING OPTION MAY STILL VARY BY 3-5% UNDER DIFFERENT CONDITIONS. THIS IS ONLY A SMALL LOSS OF ACCUMULATED PROCESSOR AND I/O TIMES AND AN ADDITION OF 40 WORDS OF SAVE CODE. THE TIME PREVIOUSLY LOGGED TO A JOB, NOW DETERMINED TO BE MCP OVERHEAD, SHOWS UP AS AN INCREASE IN THE PRO-RATED TIME FOR ALL JOBS RUNNING IN THE MIX.

THIS OPTION ENTAILS NO CHANGES TO THE STANDARD SYSTEM LOG ENTRY, AND THE TIMES NOW LOGGED AS PROCESSOR AND I/O MORE ACCURATELY REFLECT THE TIME SPENT DIRECTLY RELATING TO THE PROCESSING OF A JOB.

CHANGE NO. 25 (1680 CARDS).

THIS CHANGE DIVIDES THE SELECTION ROUTINE INTO THREE SEPARATE PROCEDURES IN ORDER TO REDUCE NO-MEMS WHEN INITIALIZING JOBS. THE THREE PROCEDURES ARE: PROCEDURE SELECTRUN, PROCEDURE SELECTRUN1, AND

PROCEDURE SELECTRUN2.

THE SHEET ENTRY MAY NOW BE PASSED TO PROCEDURE SELECTRUN AS A PARAMETER ON THE BATCH MCP. THIS CAPABILITY ALREADY EXISTS ON THE TIME-SHARING MCP. THE PARAMETER IS UTILIZED FOR INITIALIZING "PRNPBT/DISK" AND "LDCNTRL/DISK" SO THAT PROCEDURE CONTROLCARD NEED NOT BE CALLED WHEN RUNNING THESE TASKS. ALSO, THE SHEET QUEUE, WHICH IS MAINTAINED ON DISK, NEED NOT BE ALTERED, FURTHER REDUCING THE OVERHEAD ASSOCIATED WITH "PRNPBT/DISK" AND "LDCNTRL/DISK".

SEVERAL OTHER MODIFICATIONS HAVE BEEN MADE TO THE SELECTION ROUTINE.

A. WHEN A REQUEST TO EXECUTE "PRNPBT/DISK" IS PRESENTED TO THE SELECTION ROUTINE, THE AUTOPRNT OPTION IS EXAMINED. IF THIS OPTION IS SET, THE JOB IS SELECTED REGARDLESS OF THE SETTING OF THE CORE FACTOR OR THE APPARENT CORE USAGE OF THE OTHER JOBS IN THE MIX. IF THE AUTOPRNT OPTION IS NOT SET, THE JOB IS TESTED USING A CORE FACTOR OF 1.10 TIMES THE ACTUAL CORE FACTOR (A TEN PERCENT EXCESS) TO DETERMINE WHETHER SUFFICIENT CORE EXISTS.

B. WHEN A REQUEST TO EXECUTE "LDCNTRL/DISK" IS PRESENTED TO THE SELECTION ROUTINE, THE CDONLY OPTION IS EXAMINED. IF THIS OPTION IS SET, THE JOB IS SELECTED REGARDLESS OF THE SETTING OF THE CORE FACTOR OR THE APPARENT CORE USAGE OF THE OTHER JOBS IN THE MIX. IF THE CDONLY OPTION IS NOT SET, THE JOB IS TESTED USING A CORE FACTOR OF 1.10 TIMES THE ACTUAL CORE FACTOR TO DETERMINE WHETHER SUFFICIENT CORE EXISTS.

C. WHEN A REQUEST TO EXECUTE "LIBMAIN/DISK" IS PRESENTED TO THE SELECTION ROUTINE ON THE BATCH MCP, THE JOB IS TESTED USING A CORE FACTOR OF 1.10 TIMES THE ACTUAL CORE FACTOR TO DETERMINE WHETHER SUFFICIENT CORE EXISTS TO RUN THE TASK. ON THE TIME-SHARING MCP, THERE IS NO CHANGE IN THE WAY IN WHICH "LIBMAIN/DISK" IS SELECTED.

D. A NEW SPO OPTION, AUTOMESS, HAS BEEN ADDED TO THE SYSTEM. WHEN THIS OPTION IS NOT SET, THE SPO MESSAGES ASSOCIATED WITH "AUTO-LDCNTRL" (CDONLY) AND "AUTOPRINT" ARE SUPPRESSED.

FOR EXAMPLE, WHEN "PRNPBT/DISK" IS EXECUTED FROM STATUS (AS IT WILL BE WHEN THE "AUTOPRINT" OPTION IS SET AND OUTPUT DEVICES ARE AVAILABLE), A BIT IS SET IN THE SHEET ENTRY THAT IS PASSED TO SELECTRUN (SHEET[2].[4:1]). SELECTRUN WILL NOW RECOGNIZE THIS FLAG AND SUPPRESS THE NORMAL BOJ MESSAGE, PRINTING "AUTO-PRNPBT" ON THE SPO INSTEAD. SELECTRUN ALSO SETS JAR[MIX,9].[2:1] WHICH IS RECOGNIZED BY PROCEDURE FILEOPEN AND PROCEDURE COM5,

CAUSING THESE PROCEDURES TO SUPPRESS THE PRINTING OF THE OPEN AND CLOSE MESSAGES ENTIRELY.

IF THE AUTOMESS OPTION IS SET, THEN THE NORMAL BOJ/OPEN/EOJ MESSAGES WILL BE PRINTED ON THE SPO.

SIMILARLY, WHEN THE AUTOMESS OPTION IS NOT SET, AND "LDCNTRL/DISK" IS EXECUTED FROM STATUS (AS IT WILL BE WHEN A CARD READER BECOMES READY AND THE CDONLY OPTION IS SET), SHEET[2],[4:1] IS SET, CAUSING THE MESSAGE "AUTO-LDCNTRL" TO BE PRINTED ON THE SPO AND CAUSING THE OPEN AND EOJ MESSAGES TO BE SUPPRESSED.

CHANGE NO. 26 (3 CARDS).

THIS CHANGE MOVES THE FIRST CODE EXECUTED IN THE MCP FROM THE LABEL START TO ABSOLUTE LOCATION 16 IN ORDER TO FREE A COUPLE OF WORDS OF SAVE CODE IN THE OUTER BLOCK.

CHANGE NO. 27 (408 CARDS).

THIS CHANGE BREAKS PROCEDURE OTHERFILEOPEN INTO TWO SMALLER PROCEDURES. PROCEDURE OTHERFILEOPENIN HANDLES OPENING FOR INPUT AND PROCEDURE OTHERFILEOPENOUT HANDLES OPENING FOR OUTPUT. THE DIVISION WAS MADE IN AN EFFORT TO REDUCE CORE CONSUMPTION BY LARGE MCP PROCEDURES. A SECTION OF CODE TO HANDLE TYPE 19 FILES WAS MOVED FROM PROCEDURE FILEOPEN TO PROCEDURE OTHERFILEOPENIN.

CHANGE NO. 28 (2 CARDS).

THIS CHANGE ELIMINATES AN ERROR INTRODUCED BY THE XV.2 SYSTEM. THE STACK SPACE USED WHEN PROCEDURE DCWRITE WAS CALLED AS AN INDEPENDENT RUNNER, WAS NOT BEING RETURNED. AS A RESULT, THE SYSTEM EVENTUALLY HUNG DUE TO A NO MEMORY CONDITION.

CHANGE NO. 29 (45 CARDS).

THIS CHANGE CORRECTS THE FOLLOWING PROBLEMS WHICH OCCURRED IF "PRNPBT/DISK" WAS SCHEDULED:

1. WHEN ES-ED, THE OUTPUT UNIT AND THE INPUT UNIT (IF TAPE) WERE LEFT MARKED IN-USE.

2. IF THE OUTPUT UNIT (OR TAPE UNIT) WAS CLEARED (CL<UNIT>), "PRNPBT/DISK" WOULD STILL TRY TO USE THE UNIT WHEN IT ENTERED THE MIX. "PRNPBT/DISK" WILL NOW CHECK THE LABELS ON THE UNIT AND IF THEY ARE INAPPROPRIATE, TERMINATE IMMEDIATELY.

CHANGE NO. 30 (12 CARDS).

THIS CHANGE ELIMINATES AN INTERRUPT STACK OVERFLOW WHICH OCCURRED WHEN SPOUTING THE MESSAGE:

#DATACOM INQUIRY INTERRUPT IGNORED BY MCP.

THE MESSAGE IS NOW SPOUTED FROM ACTUALIOERR=S STACK. THIS CHANGE AFFECTS ONLY THOSE MCP=S COMPILED WITHOUT THE DATACOM OPTION.

CHANGE NO. 31 (3 CARDS).

THIS CHANGE UPDATES THE HEADER AND LEVEL CARDS FOR THE MCP.

CHANGE NO. 32 (151 CARDS).

THIS CHANGE ADDS PROCEDURE ENTERSYSFILE. THIS PROCEDURE WILL CREATE "LIBMAIN/DISK", "LDCNTRL/DISK", AND "PRNPBT/DISK" WHENEVER THESE FILES ARE NOT FOUND ON DISK. PREVIOUSLY, THE FILES WERE ONLY CREATED AT HALT/LOAD TIME. THEY MAY NOW BE REMOVED AT ANY TIME, AND WILL BE RECREATED WHEN THE NEED ARISES WITHOUT REQUIRING A HALT/LOAD.

CHANGE NO. 33 (35 CARDS).

THIS CHANGE IMPROVES SYSTEM RECOVERY FROM A NO MEM BY ALLOWING THE PROCESS WHICH RECEIVED THE NO MEM TO CONTINUE WITHOUT WAITING FOR THE "NO MEM" AND "OK MEM" MESSAGES TO BE PRINTED. THE PROCESS WILL CONTINUE AS SOON AS THE REQUESTED SPACE IS AVAILABLE AND WILL NOT WAIT FOR I/O COMPLETES ON THE SPO I/O=S.

CHANGE NO. 34 (45 CARDS).

THIS CHANGE ALLOWS THE OPERATOR TO SPECIFY ZERO AS THE NUMBER OF

COPIES IN THE PB MESSAGE. (E.G. PBMTC=0). WHEN ZERO IS USED, THE NUMBER OF COPIES SPECIFIED FOR EACH FILE VIA LABEL EQUATION IS IGNORED, AND EACH FILE IS PRINTED ONLY ONCE. PRINTER BACK-UP TAPES CREATED ON MCP-S PRIOR TO THE MARK XV.2 RELEASE MAY HAVE GARBAGE IN THE NUMBER OF COPIES, THUS CAUSING THE FILE TO BE PRINTED MANY TIMES. THEREFORE, PB=N SHOULD ALWAYS BE USED WHEN PRINTING TAPES ON A XV.2 OR LATER MCP.

CHANGE NO. 35 (2 CARDS).

THIS CHANGE CORRECTS A BUG IN PROCEDURE DISKCLOSE. AN ATTEMPT WAS MADE TO ACCESS BUFFERS WHICH HAD ALREADY BEEN RETURNED TO THE SYSTEM.

CHANGE NO. 36 (144 CARDS).

THIS CHANGE MAKES THE NUMBERING OF BACK-UP DISK FILES COMPATIBLE BETWEEN PACKET AND NON-PACKET SYSTEMS. PREVIOUSLY, NON-PACKET SYSTEMS USED THE NINTH WORD IN DIRECTORYTOP FOR INCREMENTING NUMBERS FOR PBD AND RUD FILES. PACKET SYSTEMS USED THE FIRST WORD IN DIRECTORYTOP + 3. WITH THIS CHANGE, BOTH MCP-S USE DIRECTORYTOP + 3. THIS CHANGE ALSO CLEANS UP THE PACKETS CODE.

CHANGE NO. 37 (4 CARDS).

THIS CHANGE CAUSES REEL, CREATION DATE, AND/OR CYCLE NUMBER TO BE PRINTED IN THE MTX OUT OR MTX IN MESSAGES, PROVIDED THEY HAVE BEEN SPECIFIED.

CHANGE NO. 38 (721 CARDS).

THIS CHANGE IMPLEMENTS THE B5700 JOB MANAGEMENT WORKING SET. THE NEW COMPILE TIME OPTIONS INTRODUCED ARE: WORKSET AND WORKMONITOR. (SEE APPENDIX A.)

CHANGE NO. 39 (3 CARDS).

THIS CHANGE CORRECTS A COMPUTATION ERROR WHICH OCCURRED WHEN THE FPB ARRAY DESCRIPTOR SIZE FIELD BECAME LARGER THAN 512.

CHANGE NO. 40 (21 CARDS).

THIS CHANGE CORRECTS TWO PROBLEMS WITH THE FLUSHING OF A PACKET PSEUDO-DECK DUE TO A PROGRAM ERROR.

1. WAIT CONTROL CARDS WERE NOT RECOGNIZED BY THE ROUTINE LOOKING FOR THE END CARD. THIS COULD CAUSE THE ORDER OF PROGRAM EXECUTION TO RUN DIFFERENTLY THAN INTENDED. NOW THE ROUTINE WILL STOP FLUSHING ON EITHER A WAIT OR END CONTROL CARD.

2. THE LAST CONTROL CARD IN THE DECK WAS NOT FLUSHED WHEN LOOKING FOR THE END CARD.

CHANGE NO. 41 (170 CARDS).

THIS CHANGE ALLOWS ALL PSEUDO DECKS, THOSE READ IN THROUGH THE CARD READER AND THOSE ZIPPED WITH FILE-ID, TO BE TREATED AS PACKETS IF THE OPTION PKTONLY IS RESET.

THIS CHANGE ALSO ALLOWS A NON-PACKET MCP TO IGNORE THE PACKET CARD. THIS ALLOWS THE SAME DECK TO BE RUN ON BOTH SYSTEMS. HOWEVER, WAIT CARDS ARE STILL INVALID ON NON-PACKET MCP-S.

THIS CHANGE MAKES THE CODE IN PROCEDURE CONTROLCARD MORE COMPATIBLE BETWEEN SYSTEMS.

CHANGE NO. 42 (106 CARDS).

THIS CHANGE ALLOWS THE FOLLOWING ADDITIONAL MESSAGES TO GO TO THE PACKET PAGE:

1. THE MESSAGE EMITTED WHEN A PACKET JOB IS SCHEDULED, AND

2. THE KEYBOARD RESPONSES TO <MIX>AU, CU, PR, PS, TI, TL, AND XS.

CHANGE NO. 43 (1 CARD).

THIS CHANGE CORRECTS A CALL ON THE PUNT PROCEDURE IN PROCEDURE WAITIO. THE INCORRECT CALL CAUSED GARBAGE TO BE PRINTED FOR THE REASON IN THE "-SYS HANG" MESSAGE INSTEAD OF "UNEXP I/O ERR". THIS ERROR WAS INTRODUCED BY PATCH XV.2.17.

CHANGE NO. 44 (1 CARD).

THIS CHANGE CORRECTS AN ERROR WHICH CAUSED A SEGMENT OF DISK TO BE OVERWRITTEN WITH INFORMATION BEGINNING AT WORD 2 OF MAIN MEMORY.

CHANGE NO. 45 (26 CARDS).

THIS CHANGE CORRECTS THE FOLLOWING BUGS BROUGHT ABOUT BY THE MARK XV.3 IMPLEMENTATIONS:

1. CORRECTS THE HANDLING OF MEMORY OBTAINED IN SELECTRUN SO THAT THE TERMINATION ROUTINES DO NOT DO TWO FORGETSPACES ON THE SAME AREA.
2. FIXES PROCEDURE BREAKOUT AND PROCEDURE RESTART ALONG WITH A FORWARD DECLARATION OF WORKSET TO INSURE COMPILATION WITH BREAKOUT SET.
3. FIXES DATACOM CODE IN SELECTRUN TO AVOID AN IMPROPER FORGETSPACE.
4. ELIMINATES SOME UNNECESSARY RJE CODE IN PROCEDURE CONTROLCARD.

CHANGE NO. 46 (1 CARD).

THIS CHANGE CORRECTS AN ERROR IN PATCH XV.2.13 WHICH LEFT SOME FILE HEADERS IN CORE WHEN THE MEMORY SPACE SHOULD HAVE BEEN RETURNED.

CHANGE NO. 47 (1 CARD).

THIS CHANGE PROPERLY RETURNS SPACE USED TO HOLD THE FILE HEADER OF AN AUXMEM FILE SPECIFIED IN A "CA" KEYIN TO THE SYSTEM.

TSSMCP CHANGES 1 THROUGH 57.

CHANGE NO. 1 (16 CARDS).

THIS CHANGE CORRECTS A MEMORY INTERLOCK PROBLEM WHICH RESULTED IN A DEADLY EMBRACE SITUATION. THIS OCCURRED ON THE PACKETS MCP WHEN A JOB SLEPT ON THE NYLONZIPPER TOGGLE.

CHANGE NO. 2 (23 CARDS).

SEE MCP CHANGE NUMBER XV.2.03

CHANGE NO. 3 (6 CARDS).

SEE MCP CHANGE NUMBER XV.2.04

CHANGE NO. 4 (13 CARDS).

THIS CHANGE PLACES A VALUE OF 63 IN THE FILE TYPE FIELD OF THE HEADER OF SCHEDULED FILES WHICH HAVE BEEN ABORTED. CANDE WILL RECOGNIZE THIS VALUE AND PRINT THE MESSAGE "ABORTED" IN RESPONSE TO A "STATUS" REQUEST.

CHANGE NO. 5 (1 CARD).

SEE MCP CHANGE NUMBER XV.2.05

CHANGE NO. 6 (36 CARDS).

SEE MCP CHANGE NUMBER XV.2.06

CHANGE NO. 7 (6 CARDS).

SEE MCP CHANGE NUMBER XV.2.08

CHANGE NO. 8 (1 CARD).

SEE MCP CHANGE NUMBER XV.2.09

CHANGE NO. 9 (1 CARD).

SEE MCP CHANGE NUMBER XV.2.11

CHANGE NO. 10 (25 CARDS).

SEE MCP CHANGE NUMBER XV.2.01

CHANGE NO. 11 (238 CARDS).

SEE MCP CHANGE NUMBER XV.2.16

CHANGE NO. 12 (2 CARDS).

SEE MCP CHANGE NUMBER XV.2.15

CHANGE NO. 13 (1 CARD).

SEE MCP CHANGE NUMBER XV.2.16

CHANGE NO. 14 (131 CARDS).

THIS CHANGE MAKES TWO MODIFICATIONS TO THE PUNT ROUTINE:

1. THE MESSAGE DISPLAYED AT THE SPO IS NOW:

   -SYS HANG, F=<VALUE OF F-REGISTER>:<REASON>

2. A NEW COMPILE TIME OPTION, AUTODUMP, HAS BEEN IMPLEMENTED. WHEN AUTODUMP IS NOT SET, THE SYSTEM WILL OPERATE AS IT DID PREVIOUSLY. THAT IS, IF THE HALT OPTION IS SET WHEN PUNT IS CALLED, IT WILL HANG WITHOUT PRINTING A MESSAGE.

IF HALT IS RESET, IT WILL PRINT THE MESSAGE AND PUT THAT STACK PERMANENTLY TO SLEEP, BUT ATTEMPT TO CONTINUE RUNNING.

IF THE AUTODUMP OPTION IS SET, PUNT IS CHANGED AS FOLLOWS:

A. PUNT WILL NOW DO ITS OWN I/O TO PREVENT OVERWRITING OF THE INTERRUPT STACK.

B. IF THE OPTION HALT IS RESET, THE MCP WILL READ THE MEMORY DUMP ROUTINE FROM DISK AND BRANCH INTO IT AFTER PRINTING THE PUNT MESSAGE. THEREFORE, AFTER THE PUNT MESSAGE IS PRINTED,

WHICH UNIT

WILL BE PRINTED. THE OPERATOR SHOULD RESPOND AS HE WOULD TO A MEMORY DUMP INITIATED THROUGH THE CARD READER. NOTE THAT THE MEMORY DUMP ROUTINE MUST BE PLACED ON DISK THROUGH THE USE OF A MEMDUMP CARD IN THE COLD OR COOL START DECK.

IF THE HALT OPTION IS SET WHEN THE AUTODUMP OPTION IS SET, THE MCP WILL PRINT THE MESSAGE AND THEN HANG, AS IT DOES ON THE BATCH MCP. PREVIOUS TO THIS PATCH, 37 WORDS OF SAVE CORE WERE USED BY THE PUNT ROUTINE. NOW, 33 WORDS ARE USED WHEN AUTODUMP IS NOT INCLUDED AND 74 WORDS WHEN IT IS INCLUDED.

CHANGE NO. 15 (1 CARD).

THIS CHANGE ALTERS THE CODE SO THAT SEGMENT ZERO OF AN OBJECT PROGRAM IS NO LONGER CHECKED. PREVIOUS TO MARK XV, A ZERO WAS IN THE WORD FIELD NOW USED TO STORE THE "VERSION" NUMBER OF A FORTRAN PROGRAM'S FPB. THIS FIELD WAS CHECKED BY THE MCP FOR A ZERO. IF THE FIELD CONTAINED OTHER THAN A ZERO, THE FORTRAN PROGRAM WOULD NOT BE EXECUTED.

CHANGE NO. 16 (1 CARD).

THIS CHANGE ALTERS THE PACKETS CODE IN PROCEDURE SPOUTER. AN INCORRECT SIZE PARAMETER WAS BEING PASSED TO PROCEDURE GETSPACE. IF MORE SPACE WAS NEEDED FOR THE MESSAGE THAN OBTAINED BY THE FAULTY GETSPACE, MEMORY LINKS WERE CLOBBERED.

CHANGE NO. 17 (1 CARD).

SEE MCP CHANGE NUMBER XV.2.18

CHANGE NO. 18 (20 CARDS).

SEE MCP CHANGE NUMBER XV.2.19

CHANGE NO. 19 (8 CARDS).

SEE MCP CHANGE NUMBER XV.2.20

CHANGE NO. 20 (2 CARDS).

SEE MCP CHANGE NUMBER XV.2.21

CHANGE NO. 21 (4 CARDS).

THIS CHANGE CORRECTS TWO ERRORS IN THE HANDLING OF TAPE FILES WHICH WERE INTRODUCED BY THE MARK XV.2 RELEASE. IN BOTH CASES, THE PROBLEM OCCURRED WHEN USING MULTI-FILE TAPES OR REVERSE READS. THE SYMPTOM WAS THAT THE JOBS CEASED TO PROCESS AND COULD NOT BE DS-ED.

CHANGE NO. 22 (72 CARDS).

THIS CHANGE OPTIMIZES CODE USED WHEN THE TWXONLY OPTION IS SET. THIS IS A SAVINGS OF 21 WORDS OF SAVE CORE.

CHANGE NO. 23 (3 CARDS).

THIS CHANGE CORRECTS THE HANDLING OF THE MCP VARIABLE IOQUESLOTS. THIS ELIMINATES AN ERROR WHICH OCCURRED AFTER A DISK FILE CONTROL WENT NOT-READY ON A SYSTEM USING THE DFX OPTION. THIS CHANGE ALSO ELIMINATES UNNECESSARY CODE IN PROCEDURE DISKORAUXERROR.

CHANGE NO. 24 (567 CARDS).

THIS CHANGE REORGANIZES PROCEDURE COMMUNICATE AND PROCEDURE SHORTCOMMUNICATE IN AN EFFORT TO REDUCE CORE USAGE AND TO MAKE BOTH MCP-S MORE COMPATIBLE. TWO NEW ROUTINES, PROCEDURE COMMUNICATE1 AND PROCEDURE COMMUNICATE0, HAVE REPLACED PROCEDURE COMMUNICATE. NUMERICALLY, EACH OF THESE ROUTINES, INCLUDING SHORTCOMMUNICATE, NOW CONTAINS THE SAME COMMUNICATES WHERE APPLICABLE FOR BOTH THE DCMCP AND TSSMCP.

IN ADDITION, A TIMEOUT VALUE HAS BEEN IMPLEMENTED FOR THE WAIT (#2), WHEN (#6), AND RECORD LEVEL LOCKOUT (#49) COMMUNICATES TO ASSURE NO UNNECESSARY SLEEPING WILL BE ALLOWED. THE TIMEOUT VALUE IS 15 SECONDS. ANY JOB SLEEPING FOR OVER 15 SECONDS WILL BE DS-ED AND THE MESSAGE:

-TIMELIMIT EXCEEDED:<MFID>/<FID>=<MIX>

WILL BE SPOUTED.

CHANGE NO. 25 (335 CARDS).

SEE MCP CHANGE NUMBER XV.2.24

CHANGE NO. 26 (1474 CARDS).

SEE MCP CHANGE NUMBER XV.2.25

CHANGE NO. 27 (369 CARDS).

THIS CHANGE REORGANIZES PROCEDURE INDIANBOY IN AN EFFORT TO REDUCE CORE USAGE. TWO NEW PROCEDURES, PROCEDURE INDIANBOY AND PROCEDURE INDIANGIRL, HAVE REPLACED PROCEDURE INDIANBOY. PROCEDURE INDIANBOY WILL HANDLE CANDE COMMUNICATES WHICH OCCUR QUITE FREQUENTLY, AND PROCEDURE INDIANGIRL WILL HANDLE EVENTS WHICH OCCUR ONLY RARELY. THE QUEUE FOR PROCEDURE INDIANBOY HAS NOT BEEN ALTERED. PROCEDURE INDIANGIRL WILL USE INDIAN.[3:15] AS ITS HEAD POINTER. IT HAS NO TAIL POINTER THUS REQUIRING SEQUENTIAL LOOKUP BEFORE INSERTION.

CHANGE NO. 28 (3 CARDS).

SEE MCP CHANGE NUMBER XV.2.26

CHANGE NO. 29 (368 CARDS).

THIS CHANGE REORGANIZES PROCEDURE OTHERFILEOPEN IN AN EFFORT TO REDUCE CORE REQUIREMENTS. TWO SMALLER PROCEDURES, PROCEDURE OTHERFILEOPENIN AND PROCEDURE OTHERFILEOPENOUT, HAVE REPLACED PROCEDURE OTHERFILEOPEN. PROCEDURE OTHERFILEOPENIN WILL HANDLE OPENING FOR INPUT AND PROCEDURE OTHERFILEOPENOUT WILL HANDLE OPENING FOR OUTPUT.

CHANGE NO. 30 (32 CARDS).

SEE MCP CHANGE NUMBER XV.2.29

CHANGE NO. 31 (3 CARDS).

THIS CHANGE UPDATES THE HEADER AND LEVEL CARDS FOR THE TSSMCP.

CHANGE NO. 32 (150 CARDS).

SEE MCP CHANGE NUMBER XV.2.32

CHANGE NO. 33 (46 CARDS).

SEE MCP CHANGE NUMBER XV.2.33

CHANGE NO. 34 (49 CARDS).

SEE MCP CHANGE NUMBER XV.2.34

CHANGE NO. 35 (1 CARD).

THIS CHANGE CAUSES THE CHARGE CODE TO BE ASSIGNED TO A SCHEDULED TASK WHICH IS INITIATED BY ANOTHER SCHEDULED TASK.

CHANGE NO. 36 (1 CARD).

THIS CHANGE CAUSES SCHEDNUM, WHICH IS THE NUMBER ASSOCIATED WITH THE FILE "FIL<SYSNO><NUMBER>/SCHEDUL", TO WRAP AROUND TO A VALUE OF 1 RATHER THAN 0.

CHANGE NO. 37 (3 CARDS).

SEE MCP CHANGE NUMBER XV.2.35

CHANGE NO. 38 (132 CARDS).

SEE MCP CHANGE NUMBER XV.2.36

CHANGE NO. 39 (28 CARDS).

THIS CHANGE ELIMINATES A SYSTEM LOOP WHICH OCCURRED WHEN A "XT" OR "CT" KEYIN WAS ENTERED FOR A JOB STARTED AT THE SITE FOR WHICH NO PROCESSOR AND I/O TIME LIMITS WERE SPECIFIED.

CHANGE NO. 40 (58 CARDS).

THIS CHANGE CORRECTS TWO ERRORS IN THE HANDLING OF THE QUEUE:

1. WHEN AN ATTEMPT WAS MADE TO SEND OUTPUT TO A STATION WHILE ITS LINE WAS LOCKED, AND

2. WHEN INPUT WAS RECEIVED WHEN OUTPUT WAS QUEUED BUT NOT YET WRITTEN.

THE LATER CONDITION MOST OFTEN OCCURRED AFTER AN "RS ALL" KEYIN. BOTH OF THESE CONDITIONS LED TO INCORRECTLY LINKED QUEUES, EVENTUALLY CAUSING A SYSTEM HANG.

THIS CHANGE ALSO INCREASES THE STACK FOR PROCEDURE DCERR TO ELIMINATE A POSSIBLE STACK OVERFLOW. ALSO, CODE HAS BEEN OPTIMIZED IN ORDER TO REDUCE THE SIZE OF THE MCP WHEN THE TWXONLY OPTION IS USED.

CHANGE NO. 41 (6 CARDS).

SEE MCP CHANGE NUMBER XV.2.37

CHANGE NO. 42 (64 CARDS).

THIS CHANGE RESTORES A DELAY WHEN DOING A BLASTREAD ON A B992 ADAPTER. WITHOUT THIS DELAY, THE ADAPTER IS NOT CLEARED BY THE BLASTREAD.

ALSO, THIS CHANGE MODIFIES THOSE PROCEDURES IN THE MCP WHICH USE THE BLASTREAD PROCEDURE TO SPOUT A MESSAGE IF THE ADAPTER IN QUESTION IS NOT CLEARED BY THE BLASTREAD. IF A LINE FAILS TO RETURN TO AN IDLE STATUS AFTER A "CL" KEYIN, THE MESSAGE:

LINE <LINE NUMBER> DID NOT CLEAR

IS PRINTED AT THE SPO. PREVIOUSLY, THE RESPONSE INDICATED THAT THE LINE HAD BEEN CLEARED.

CHANGE NO. 43 (12 CARDS).

THIS CHANGE ELIMINATES A SYSTEM HANG WHICH OCCURRED WHEN A DISK FAILURE HAPPENED DURING SWAPPING. PROCEDURE SWAPPINGIO CONTINUED BEFORE THE ERROR WAS PROPERLY HANDLED.

CHANGE NO. 44 (2 CARDS).

THIS CHANGE CORRECTS THE "SM" KEYBOARD REQUEST. THE TABCNT FIELD OF THE WRONG JOB WAS BEING INCREMENTED AND DECREMENTED.

CHANGE NO. 45 (3 CARDS).

SEE MCP CHANGE NUMBER XV.2.39

CHANGE NO. 46 (21 CARDS).

SEE MCP CHANGE NUMBER XV.2.40

CHANGE NO. 47 (171 CARDS).

SEE MCP CHANGE NUMBER XV.2.41

CHANGE NO. 48 (106 CARDS).

SEE MCP CHANGE NUMBER XV.2.41

CHANGE NO. 49 (7 CARDS).

THIS CHANGE CORRECTS AN ERROR IN PATCH XV.2.33 WHICH CAUSED THE SEGMENTED SAVE AREAS USED TO HOLD THE "NO MEM" AND "OK MEM" MESSAGES TO BE LEFT IN USE. OVER AN EXTENDED PERIOD OF TIME, THIS COULD REQUIRE MORE SPACE FOR SEGMENTED SAVE AREAS, EXAGGERATING THE NO MEM SITUATION.

CHANGE NO. 50 (1 CARD).

THIS CHANGE CORRECTS A CALL ON THE PUNT PROCEDURE IN PROCEDURE WAITIO. THE INCORRECT CALL CAUSED GARBAGE TO BE PRINTED FOR THE REASON IN THE "*SYS HANG" MESSAGE INSTEAD OF "UNEXP I/O ERR". THIS ERROR WAS INTRODUCED BY PATCH XV.2.14.

CHANGE NO. 51 (2 CARDS).

THIS CHANGE CORRECTS AN ERROR IN PATCH XV.2.24 WHICH COULD CAUSE THE MCP NOT TO AWAKEN A PROGRAM PROPERLY. AS A RESULT, THE JOB WOULD BE DS-ED FOR "EXCESS TIME".

CHANGE NO. 52 (1 CARD).

SEE MCP CHANGE NUMBER XV.2.44

CHANGE NO. 53 (14 CARDS).

THIS CHANGE RE-INITIALIZES THE ARRAYS, SEGD AND LBL (LOCAL TO

PROCEDURE SELECTRUN), FOR EACH SELECTION CANDIDATE OBTAINED FROM THE SHEET. THIS ELIMINATES PROBLEMS WITH RE-USING MEMORY AREAS OBTAINED ABOVE THE FENCE DURING THE SELECTION PROCESS.

CHANGE NO. 54 (8 CARDS).

THIS CHANGE CORRECTS AN ERROR IN PATCH XV.2.26 WHICH CAUSED THE BOJ AND EOJ MESSAGES FOR "PRNPBT/DISK" AND "LDCNTRL/DISK" TO BE OMITTED FROM THE LOG IF THE AUTOMESS OPTION WAS NOT SET. NOW THESE MESSAGES WILL APPEAR IN THE LOG REGARDLESS OF THE SETTING OF THE AUTOMESS OPTION.

CHANGE NO. 55 (1 CARD).

THIS CHANGE CORRECTS AN ERROR IN PATCH XV.2.04 WHICH COULD CAUSE ERRORS IN THE QUEUEING OF THE SEGMENTED SAVE AREAS. THIS WOULD LEAD TO A SYSTEM HANG DUE TO A "-DATACOM INVALD LINK".

CHANGE NO. 56 (1 CARD).

SEE MCP CHANGE NUMBER XV.2.46

CHANGE NO. 57 (1 CARD).

SEE MCP CHANGE NUMBER XV.2.47

INTRINSICS CHANGES 1 THROUGH 5.

CHANGE NO. 1 (1 CARD).

THIS CHANGE CORRECTS A CONDITION WHERE A READ FROM A VARIABLE LENGTH (TECHNIQUE C) TAPE FILE RESULTED IN AN INCORRECT READ FOLLOWING A REEL SWITCH. THIS APPLIES TO COBOL68 PROGRAMS ONLY.

CHANGE NO. 2 (1 CARD).

THIS CHANGE CORRECTS A CONDITION WHERE WRITE BLOCK CONSTRUCTS FOR COBOL68 PROGRAMS ONLY WROTE THE FIRST RECORD OF THE BLOCK FOR EVEN PARITY (ALPHA) TAPES.

CHANGE NO. 3 (2 CARDS).

THIS CHANGE CORRECTS AN ERROR IN THE HANDLING OF THE DISK SPACE STATEMENT IN ALGOL. IF THE RECORD POINTER WAS SET TO A VALUE GREATER THAN THE MAXIMUM ALLOWED FOR THE FILE, AND THEN A WRITE WAS DONE, THE DISK ADDRESS FOR THE WRITE WAS UNSPECIFIED. NOW, THE END-OF-FILE ACTION LABEL ON THE WRITE WILL BE TAKEN OR THE JOB WILL BE DS-ED IF NO LABEL IS DECLARED.

CHANGE NO. 4 (3 CARDS).

THIS CHANGE UPDATES THE HEADER AND LEVEL CARDS FOR THE PROGRAM.

CHANGE NO. 5 (1 CARD).

THIS CHANGE CORRECTS THE HANDLING OF A COBOL68 RANDOM DISK FILE OPENED I/O AND IMPROVES THE PROCESSING OF COBOL68 I/O DISK FILES. PREVIOUSLY, WHEN AN UNBLOCKED DISK FILE WAS OPENED I/O (WITH MORE THAN ONE BUFFER), AND A WRITE OF RECORD N WAS FOLLOWED BY A READ OF RECORD N (THE SAME RECORD), AN INCORRECT RECORD READ WAS DONE.

ALGOL CHANGE 1.

CHANGE NO. 1 (3 CARDS).

THIS CHANGE UPDATES THE HEADER AND LEVEL CARDS FOR THE ALGOL COMPILER.

XALGOL CHANGE 1.

CHANGE NO. 1 (3 CARDS).

THIS CHANGE UPDATES THE HEADER AND LEVEL CARDS FOR THE XALGOL COMPILER.

BASIC CHANGE 1.

CHANGE NO. 1 (1 CARD).

THIS CHANGE UPDATES THE HEADER CARD FOR THE BASIC COMPILER.

COBOL CHANGES 1 THROUGH 11.

CHANGE NO. 1 (6 CARDS).

THIS CHANGE ELIMINATES AN INVALID SYNTAX ERROR GENERATED WHEN BOTH A SECTION NAME AND ITS FOLLOWING PARAGRAPH NAME WERE REFERENCED BEFORE THEY WERE DECLARED, AND THE FIRST VERB ENCOUNTERED IN THE SECTION WAS A SORT VERB.

CHANGE NO. 2 (1 CARD).

THIS CHANGE ELIMINATES AN INVALID SYNTAX ERROR GENERATED FOR THE FOLLOWING READ STATEMENT:

READ <FILENAME> AT END RETURN <SORT-NAME>.

CHANGE NO. 3 (1 CARD).

THIS CHANGE CLOSES THE NEWTAPE FILE WITH CRUNCH TO REDUCE THE AMOUNT OF DISK REQUIRED.

CHANGE NO. 4 (1 CARD).

THIS CHANGE WILL CAUSE A SYNTAX ERROR TO BE GENERATED FOR AN INVALID PICTURE OF:

<LEVEL-NUMBER> <DATA-NAME> PICTURE J.

CHANGE NO. 5 (1 CARD).

THIS CHANGE CORRECTS THE COMPILER TO PROPERLY RECOGNIZE THE RESERVED WORD CONSOLE.

CHANGE NO. 6 (2 CARDS).

THIS CHANGE CORRECTS THE CODE GENERATED FOR MOVES TO OR FROM SUBSCRIPTED COMPUTATIONAL FIELDS. PREVIOUSLY, EXTRA WORDS WERE

DELETED FROM THE STACK.

CHANGE NO. 7 (2 CARDS).

THIS CHANGE IMPLEMENTS THE ABILITY TO RECOGNIZE AN * (ASTERISK) IN TIME SHARING INPUT FORMAT AS A COMMENT CARD.

CHANGE NO. 8 (18 CARDS).

THIS CHANGE WILL CAUSE A SYNTAX ERROR FOR OPTION 4 OF THE CLOSE STATEMENT AND OPTION 5 OF THE OPEN STATEMENT IF THE RECORD-NAME DOES NOT REFERENCE A RECORD DECLARED IN WORKING-STORAGE.

CHANGE NO. 9 (2 CARDS).

THIS CHANGE IMPROVES SYNTAX CHECKING OF PERFORM STATEMENTS TO INSURE THAT THE UNTIL CLAUSE IS COMPLETE. PREVIOUSLY, STATEMENTS SUCH AS:

```
PERFORM PAR-A VARYING Y FROM 1 BY 1 UNTIL Y=2
            AFTER X FROM 1 BY 1 UNTIL =7
```

WOULD GENERATE BAD CODE AND CAUSE A SYSTEM HANG.

CHANGE NO. 10 (2 CARDS).

THIS CHANGE ALLOWS THE RERUN STATEMENT TO CONTAIN THE WORD "DISK" OR "TAPE" FOR THE STATEMENT:

```
RERUN ON TAPE
RERUN ON DISK
```

THE BREAKOUT FILE WILL BE PLACED ON DISK IN BOTH CASES.

CHANGE NO. 11 (2 CARDS).

THIS CHANGE UPDATES THE HEADER AND LEVEL CARDS FOR THE COBOL COMPILER.

COBOL68 CHANGES 1 THROUGH 10.

CHANGE NO. 1 (4 CARDS).

THIS CHANGE CORRECTS THE $ FROM OPTION WHICH ALLOWS SAVED SOURCE IMAGES TO BE RECALLED FOR SUBSEQUENT COMPILATION.

CHANGE NO. 2 (2 CARDS).

THIS CHANGE INSURES THAT THE COBOL68 COMPILER WILL CLEAN UP THE PSEUDO-STACK FOLLOWING AN EXAMINE STATEMENT. THIS ELIMINATES IMPROPER CODE GENERATION FOR THE NEXT STATEMENT AFTER THE EXAMINE STATEMENT.

CHANGE NO. 3 (10 CARDS).

THIS CHANGE CORRECTS A PROBLEM WITH MOVING TO A RECEIVING FIELD LARGER THAN 63 CHARACTERS. (THIS INCLUDES EDITED RECEIVING FIELDS WHERE ONE OR MORE PARTS OF THE PICTURE WERE GREATER THAN 63 CHARACTERS.) FEWER CHARACTERS WERE BEING MOVED THAN SPECIFIED IN THE RECEIVING FIELD.

CHANGE NO. 4 (20 CARDS).

THIS CHANGE IMPROVES ERROR RECOVERY IN THE COBOL68 COMPILER. PREVIOUSLY, THE COMPILER WOULD SOMETIMES LOOP OR INCORRECTLY TERMINATE WHEN SUFFICIENTLY CONFUSING SYNTAX ERRORS HAD OCCURRED.

CHANGE NO. 5 (4 CARDS).

THIS CHANGE ALLOWS THE WORD "DISK" TO APPEAR IN THE I-O-CONTROL PARAGRAPH IN PLACE OF THE WORD "TAPE" IN A RERUN CLAUSE. THE RERUN FILE WILL ALWAYS BE ON DISK WHEN THE "RERUN ON..." OPTION IS USED.

NOTE: "RERUN EVERY END OF REEL ...". IS A TAPE OPTION AND FUNCTIONS AS BEFORE.

CHANGE NO. 6 (6 CARDS).

THIS CHANGE CORRECTS A LOSS OF SIGN WHEN DISPLAYING A NUMERIC ITEM.

CHANGE NO. 7 (25 CARDS).

THIS CHANGE CORRECTS SEVERAL PROBLEMS WITH MOVES OF DATA TO EDITED AND UN-EDITED ALPHA AND ALPHA-NUMERIC RECEIVING FIELDS. PREVIOUSLY, SUCH MOVES COULD RESULT IN INCORRECT RESULTS AND/OR MEMORY LINK DESTRUCTION.

CHANGE NO. 8 (1 CARD).

THIS CHANGE ELIMINATES AN INVALID SYNTAX ERROR WHICH WAS GENERATED WHEN AN INDEX NAME WAS USED AS A SUBSCRIPT FOR A CONDITION-NAME.

CHANGE NO. 9 (2 CARDS).

THIS CHANGE CORRECTS A CONDITION WHERE THE COMPILER DID NOT CORRECTLY FILL THE LIBRARY FILE-S MFID AND FID WITH THE NAME SPECIFIED IN THE COPY STATEMENT.

CHANGE NO. 10 (2 CARDS).

THIS CHANGE UPDATES THE LEVEL CARD FOR THE CUBOL68 COMPILER.

ESPOL CHANGES 1 AND 2.

CHANGE NO. 1 (3 CARDS).

THIS CHANGE UPDATES THE HEADER AND LEVEL CARDS FOR THE ESPOL COMPILER.

CHANGE NO. 2 (44 CARDS).

THIS CHANGE MODIFIES THE WAY IN WHICH THE VOID AND VOIDT OPTIONS ARE HANDLED. PREVIOUSLY, INCONSISTENT RESULTS OCCURRED IF

A. VOIDS OR VOIDTS WERE NESTED, AND IF

B. $VOID CARDS OR $VOIDT CARDS WERE MIXED WITH EACH OTHER OR WITH $SET, $ROP, OR $RESET CARDS WHICH SPECIFIED THE VOID OR VOIDT OPTIONS.

NOW THERE ARE FOUR COMPLETELY INDEPENDENT WAYS OF VOIDING CARDS, THESE ARE:

1) $VOID CARDS (WHICH MAY INCLUDE A RANGE),

2) $VOIDT CARDS (WHICH MAY INCLUDE A RANGE),

3) THE VOID OPTION,

4) THE VOIDT OPTION.

A RECORD FROM CARD OR TAPE WILL BE VOIDED IF IT FALLS WITHIN THE RANGE OF A DOLLAR VOID CARD OR IF THE VOID OPTION IS SET. ADDITIONALLY A RECORD FROM TAPE WILL BE VOIDED IF IT FALLS WITHIN THE RANGE OF A VOIDT CARD OR IF THE VOIDT OPTION IS SET. THESE OPTIONS MAY BE INTERMIXED AND NESTED FREELY.

IT SHOULD BE NOTED THAT $ CARDS IN THE CARD INPUT FILE ARE ALWAYS PROCESSED, REGARDLESS OF THE SETTING OF THE VOID OPTION OR OF ANY VOID CARDS. IN ADDITION, THIS CHANGE CORRECTS AN ERROR WHERE A CARD WAS BEING ERRONEOUSLY VOIDED. THIS OCCURRED IF THE FIRST CARD PAST THE END OF A VOID OR VOIDT RANGE WAS A DOLLAR CARD, WITH THE DOLLAR SIGN IN COLUMN TWO, AND THE NEXT CARD HAD A NON-BLANK FIRST COLUMN.

FORTRAN CHANGE 1.

CHANGE NO. 1 (3 CARDS).

THIS CHANGE UPDATES THE HEADER AND LEVEL CARDS FOR THE FORTRAN COMPILER.

CANDE CHANGES 1 THROUGH 3.

CHANGE NO. 1 (13 CARDS).

THIS CHANGE PREVENTS CANDE FROM ACCESSING WORK FILES WHICH HAVE NOT BEEN PROPERLY LOADED (ERROR EOJ FOR LOAD/CANDE PROGRAM).

CHANGE NO. 2 (40 CARDS).

THIS CHANGE PLACES A VALUE OF 63 IN THE "FILE TYPE" FIELD OF SCHEDULED FILES WHICH HAVE BEEN ABORTED. CANDE WILL NOW RECOGNIZE THIS VALUE AND PRINT THE MESSAGE "ABORTED" IN RESPONSE TO A "STATUS" REQUEST.

CHANGE NO. 3 (1 CARD).

SEE TSSMCP CHANGE NUMBER XV.2.35

COOL CHANGES 1 AND 2.

CHANGE NO. 1 (25 CARDS).

THIS CHANGE IMPLEMENTS CHANGES TO THE COOL AND COLD START ROUTINES. IT IS AN ATTEMPT TO CATCH ANY CONFLICTS IN DIRECTORY ORGANIZATION, ESPECIALLY WHEN INITIALLY CREATED BY COLD START. BOTH COOL AND COLD START WILL NOW INFORM THE USER WHERE USER DISK STARTS (VALUE OF THE "DIRECT" CARD) WITH THE MESSAGE:

USER DISK BEGINS AT <NUMBER>

THE COLD START ROUTINE WILL CHECK THE "DIRECT" VALUE AGAINST THAT OF DIRECTORYTOP (VALUE OF THE "DRCTRYTP" CARD) AND ANY DECLARED "FILE" DISK ADDRESSES. IF THE BEGINNING OF USER DISK ("DIRECT") IS LESS THAN OR EQUAL TO DIRECTORYTOP, THE USER WILL RECEIVE THE MESSAGE:

BAD DIRECT VALUE

IN ADDITION, IRREGARDLESS OF THE VALIDITY OF "DIRECT", A CHECK IS MADE TO INSURE THAT ONLY THE DIRECTORY FILE (IF ONE EXISTS) RESIDES BELOW THE "DIRECT" VALUE. IF IT IS DETERMINED THAT AN ILLEGAL ADDRESS HAS BEEN SPECIFIED THE MESSAGE:

BAD DIRECT VALUE
CHECK DECLARED FILE ADDRESSES

WILL BE SPOUTED.

PREVIOUSLY, IF THE VALUE SPECIFIED FOR "DIRECT" WAS LESS THAN 4500, THE VALUE OF "DIRECT" WOULD ARBITRARILY BE SET TO THIS NUMBER AND NO MESSAGE WOULD BE GIVEN TO INDICATE ANY SUCH ACTION HAD TAKEN PLACE. IT IS ASSUMED THAT THE VALIDITY CHECKING OF THIS CHANGE IS SUFFICIENT TO HAVE ELIMINATED THE NEED FOR SUCH A HAZARDOUS DEFAULT ASSIGNMENT.

CHANGE NO. 2 (31 CARDS).

THIS CHANGE IMPLEMENTS SOME IMPROVEMENTS TO THE COOL START ROUTINE.

A. IF A PRINTER IS AVAILABLE, ALL OUTPUT CONCERNING FILES WHICH MAY HAVE BEEN REMOVED OR ALTERED BY COOL START WILL NOW GO TO THE PRINTER. IF NO PRINTER EXISTS OUTPUT WILL BE TO THE SPO, AS BEFORE. THE NOTICE, "CHECK PRINTER FOR OUTPUT", WILL APPEAR ON THE SPO IF A PRINTER IS AVAILABLE

AT COOL START INITIATION.

B. OVERLAPPING USE OF THE MESSAGE ARRAY IS ELIMINATED.

C. THE AUTOMESS OPTION MAY BE SET BY USE AUTOMESS, TYPE AUTOMESS, OR OPTN 1 DATA CARDS.

LOGAN CHANGE 1.

CHANGE NO. 1 (1 CARD).

THIS CHANGE UPDATES THE HEADER CARD FOR THE PROGRAM.

LOGOUT CHANGE 1.

CHANGE NO. 1 (1 CARD).

THIS CHANGE UPDATES THE HEADER CARD IN THE PROGRAM.

MLUGAN CHANGE 1.

CHANGE NO. 1 (430 CARDS).

THIS CHANGE ALLOWS THE MAINTENANCE LOG ANALYZER PROGRAM TO RECOVER FROM FATAL ERRORS IN THE LOG (E.G., FLAG BIT, INVALID INDEX, INTEGER OVERFLOW). WHEN ONE OF THESE ERRORS OCCURS WHILE PROCESSING A MAINTENANCE LOG (DUE TO A BAD ENTRY IN THE LOG), THE PROCESSING OF THE LOG STOPS AND THE INFORMATION GATHERED UP TO THAT POINT IS LISTED IN THE VARIOUS REPORTS REQUESTED.

AN INDICATION OF THE ERROR ENCOUNTERED AND THE LOCATION OF THE ERROR IN THE LOG IS WRITTEN ON THE END-OF-JOB SUMMARY STATISTICS IN THE FOLLOWING FORM:

<ERROR> BRANCH : ENTRY <NNN> AT RECORD <RRRR> SEGMENT <SSSS>

WHERE <ERROR> CAN BE ONE OF SIX ERROR CONDITIONS:

1) FLAG BIT

2) INVALID INDEX

3) INTEGER OVERFLOW

4) EXPONENT OVERFLOW

5) DIVIDE BY ZERO

6) UNEXPECTED END-OF-FILE.

<NNN> IS THE ENTRY NUMBER, <RRRR> IS THE RECORD NUMBER, AND <SSSS> IS THE DISK SEGMENT OF THE FILE.

OLMAINT CHANGE 1.

CHANGE NO. 1 (1 CARD).

THIS CHANGE UPDATES THE LEVEL CARD FOR THE PROGRAM.

PAPER CHANGE 1.

CHANGE NO. 1 (2 CARDS).

THIS CHANGE PREVENTS "PAPEM/CANDE" FROM CALLING ITS RECURSIVE SORT ROUTINE WHEN THERE ARE NO RECORDS TO SORT (NO INPUT TO THE PROGRAM).

PMERGE CHANGE 1.

CHANGE NO. 1 (5 CARDS).

THIS CHANGE UPDATES THE HEADER AND LEVEL CARDS FOR THE PROGRAM.

ROTO CHANGES 1 AND 2.

CHANGE NO. 1 (17 CARDS).

THIS CHANGE IS REQUIRED TO ANALYZE SEPTIC TANKS ON DATA-COM MCP'S CONTAINING MCP CHANGE XV.2.12. SEPTIC TANKS CREATED ON EARLIER VERSIONS OF THE MCP WILL NOW CAUSE "ROTO/ROOTER" TO FAIL. THIS CHANGE DOES NOT AFFECT SEPTIC TANKS CREATED ON THE TSSMCP.

WITH THIS CHANGE, THE CONTENTS OF THE STATION ARRAY FOR THE APPROPRIATE STATION WILL BE PRINTED IN OCTAL TO THE IMMEDIATE RIGHT OF THE TIME AT WHICH THE ENTRY WAS MADE.

CHANGE NO. 2 (1 CARD).

THIS CHANGE UPDATES THE DATE CARD FOR THE PROGRAM.

TEMPORARY CHANGES TO THE MARK XV.3 SYSTEM

MCP CHANGES.

CHANGE NO. 101 (11 CARDS).

THIS PATCH CORRECTS A COBOL68 PROBLEM WITH OPENING FILES IN AN INPUT OR OUTPUT PROCEDURE OF A SORT.

CHANGE NO. 102 (2 CARDS).

THIS PATCH PREVENTS PROBLEMS CAUSED BY OPENING A DISK FILE WHOSE BUFFER EXCEEDS 1890 WORDS.

CHANGE NO. 103 (2 CARDS).

THIS PATCH CORRECTS THE HANDLING OF "SM" AND "HM" INPUT MESSAGES.

CHANGE NO. 104 (1 CARD).

THIS PATCH PREVENTS A STACK OVERFLOW DURING INITIALIZATION.

CHANGE NO. 105 (2 CARDS).

THIS PATCH KEEPS PROCEDURE STATIONMESSAGEWRITER FROM DOING CONTINUOUS I/O-S TO A BUSY STATION.

CHANGE NO. 106 (6 CARDS).

THIS PATCH ALLOWS THE LOADING OF B6500 LIBRARY TAPES WITH FILE NAMES EXCEEDING 7 CHARACTERS.

CHANGE NO. 107 (1 CARD).

THIS PATCH REFORMATS THE "SYSTEM HANG" MESSAGE.

CHANGE NO. 108 (1 CARD).

THIS PATCH CORRECTS AN ERROR IN MCP PROCEDURE BACKCLOSE THAT WOULD SOMETIMES CAUSE PUD FILES NOT TO BE PUNCHED EVEN THOUGH THE OPTION AUTOPRNT WAS SET.

CHANGE NO. 109 (2 CARDS).

THIS PATCH CORRECTS SEVERAL PROBLEMS WITH THE BREAKOUT/RESTART MCP OPTION.

CHANGE NO. 110 (3 CARDS).

THIS PATCH PRINTS THE CURRENT Q-VALUE WITH THE QV MESSAGE ON THE SPO.

CHANGE NO. 111 (1 CARD).

THIS CHANGE CORRECTS A CALL ON PROCEDURE PUNT IN PROCEDURE WAITIO. THE INCORRECT CALL CAUSED GARBAGE TO BE PRINTED FOR THE REASON IN THE "=SYS HANG" MESSAGE INSTEAD OF "UNEXP I/O ERR". THIS ERROR WAS INTRODUCED IN PATCH XV.3.17.

CHANGE NO. 112 (1 CARD).

THIS CHANGE CORRECTS AN ERROR WHICH SOMETIMES CAUSED A SEGMENT OF DISK TO BE OVERWRITTEN WITH INFORMATION BEGINNING AT WORD 2 OF MAIN MEMORY.

CHANGE NO. 113 (26 CARDS).

THIS PATCH CORRECTS VARIOUS BUGS WHICH MANIFESTED THEMSELVES WITH THE ADVENT OF RELEASE XV.3. THEY INCLUDE:

1. PROPER HANDLING OF MEMORY OBTAINED IN SELECTRUN SUCH THAT THE TERMINATION ROUTINES DO NOT CAUSE DUAL FORGETTING OF SAID AREAS.

2. FIXES TO BOTH BREAKOUT AND RESTART PROCEDURES ALONG WITH FORWARD DECLARATION OF WORKSET TO INSURE COMPILATION WITH

"BREAKOUT" SET.

3. A FIX OF DATACOM CODE IN SELECTRUN TO AVOID AN IMPROPER FORGETSPACE

4. ELIMINATION OF SOME UNNECESSARY RJE CODE IN CONTROLCARD.

CHANGE NO. 114 (4 CARDS).

THIS PATCH CORRECTS AN INTERLOCKING PROBLEM. A PB OF A TAPE COULD HAVE CAUSED ERRORS IN IOQUE.

CHANGE NO. 115 (10 CARDS).

THIS PATCH CORRECTS AN ERROR WHICH CAUSED THE PRO-RATED TIME CHARGED TO A JOB TO BE INCORRECT. THIS WAS CAUSED BY THE POSITION OF THE CALL ON IDLETIME IN SELECTRUN WHICH CAME AFTER THE JARROW WAS INITIALIZED FOR THE JOB AND BEFORE THE PROCESSOR TIME WAS. IDLETIME THEREFORE INCLUDED A GARBAGE VALUE FOR THAT JOB.

CHANGE NO. 116 (10 CARDS).

THIS CHANGE CORRECTS THE USE OF THE VARIABLE NT1 IN PROCEDURE CONTROLCARD, THUS ELIMINATING A HANG WHICH COULD OCCUR WHEN A CONTROL CARD WAS ENTERED FROM A REMOTE TERMINAL.

CHANGE NO. 117 (1 CARD).

THIS CHANGE CORRECTS AN ERROR WHICH CAUSED THE FPB TO BE SHIFTED BY ONE WORD ON A SHAREDISK SYSTEM.

CHANGE NO. 118 (3 CARDS).

THIS CHANGE CORRECTS AN ERROR IN THE NEWLOGGING OPTION WHICH ALLOWED A JOB ON A 2 PROCESSOR SYSTEM TO BE INITIATED WITHOUT STARTING ITS LOGGING.

CHANGE NO. 119 (2 CARDS).

THIS PATCH CORRECTS TWO ERRORS IN PROCEDURE PRINTBACKUP:

1. THE OUTPUT FOR AN RJE STATION WAS BEING SENT TO THE SITE
2. PUNCH BACKUP WAS BEING PRINTED.

CHANGE NO. 120 (1 CARD).

THIS PATCH CORRECTS AN ERROR THAT CAUSED AN INVALID INDEX IN CONTROL STATE.

CHANGE NO. 121 (2 CARDS).

THIS PATCH ALLOWS THE MCP TO COMPILE WITHOUT AUXMEM SET TRUE.

CHANGE NO. 122 (5 CARDS).

THIS PATCH CORRECTS SEVERAL PROBLEMS IN PROCEDURE BACKCLOSE.

1) WHEN CLOSING THE PBD FILES OF A PROGRAM, THE VARIABLE "J" WAS USED TO HOLD THE PBD NUMBER. J, HOWEVER, IS AN INTEGER, AND IF THE PBD NUMBER GOT TO 8000001 OR MORE, STRANGE THINGS WOULD RESULT.

2) HEADER[6] WAS NOT ZEROED OUT FOR NON RJE SYSTEMS. THEREFORE THE LCPBD MESSAGE WOULD PRINT GARBAGE STATION NUMBERS FOR PBD FILES

CHANGE NO. 123 (2 CARDS).

THIS PATCH WILL ADD THE I/O CHANNEL NUMBER TO THE ROTO OUTPUT.

CHANGE NO. 201 (1 CARD).

THIS PATCH WILL ENABLE THE USE OF AN "SM" KEYBOARD INPUT MESSAGE AFTER THE USE OF AN "HM" KEYBOARD INPUT MESSAGE.

CHANGE NO. 202 (1 CARD).

THIS PATCH KEEPS JOBS WHOSE PRT EXCEEDS 1023 WORDS FROM BEING EXECUTED.

CHANGE NO. 203 (2 CARDS).

THIS PATCH PREVENTS FILES FROM BEING REMOVED DURING AN UNLOAD IF PARITY ERRORS OCCURRED IN THE FILE.

CHANGE NO. 204 (2 CARDS).

THIS PATCH ALLOWS REMOTE USERS TO RECEIVE NOTIFICATION OF CONTROL CARD ERRORS.

CHANGE NO. 205 (25 CARDS).

THIS PATCH SHOULD BE IMPLEMENTED WHEN OVERWRITES OF DISK ADDRESS ZERO ARE OCCURRING. THIS IS A DIAGNOSTIC PATCH AND WILL HALT THE SYSTEM BEFORE THE OVERWRITE OCCURS. NO ERROR MESSAGE WILL BE GIVEN WHEN THE SYSTEM HANGS.

CHANGE NO. 206 (1 CARD).

THIS PATCH ADDS THE SYSTEM NUMBER TO THE RESULTS OF THE SEARCH STATEMENT. THIS PATCH PERTAINS TO SHARED DISK SYSTEMS. THE SYSTEM NUMBER WILL BE STORED IN THE SEVENTH WORD OF THE SEARCH ARRAY IN BIT POSITION [9:2].

CHANGE NO. 207 (1 CARD).

THIS PATCH WILL ELIMINATE AN EXTRANOUS CARD FROM THE OUTPUT DECK OF AN UNLABELED PUNCH FILE.

CHANGE NO. 208 (2 CARDS).

THIS PATCH CORRECTS THE PROBLEM OF SYSTEM FILE DISK DIRECTORY HEADERS BEING MARKED IN-USE AFTER A PROGRAM HAD PERFORMED A SEARCH AGAINST THEM.

TSSMCP CHANGES.

CHANGE NO. 101 (1 CARD).

THIS PATCH REFORMATS THE "SYSTEM HANG" MESSAGE.

CHANGE NO. 102 (10 CARDS).

THIS CHANGE CORRECTS AN ERROR IN THE HANDLING OF COBOL68 OPEN STATEMENTS THAT APPEAR IN THE INPUT OR OUTPUT PROCEDURE OF A SORT. THE FILES WILL NOW BE LEFT OPEN AS THEY SHOULD.

CHANGE NO. 103 (1 CARD).

THIS PATCH CORRECTS AN ERROR IN MCP PROCEDURE BACKCLOSE THAT WOULD SOMETIMES CAUSE PUD FILES NOT TO BE PUNCHED EVEN THOUGH THE OPTION AUTOPRNT WAS SET.

CHANGE NO. 104 (1 CARD).

THIS PATCH ADDS THE SPOUT FOR THE DUP FILE MESSAGE.

CHANGE NO. 105 (1 CARD).

THIS PATCH FIXES THE SCHEDULE LINE "XS" KEYIN.

CHANGE NO. 106 (1 CARD).

THIS PATCH ELIMINATES A SYSTEM HANG WHICH OCCURRED WHEN SWITCHING TO THE SECOND REEL OF A BACKUP TAPE. A PROBLEM IN THE TSSMCP PROCEDURE PRNPBTSPECASE CAUSED AN INVALID INDEX IN CONTROL STATE AT LINE 12540000 WHICH CAUSED M[0] TO BE OVERWRITTEN AND THE SYSTEM TO GO DOWN FOR "NO MEMS".

CHANGE NO. 107 (2 CARDS).

THIS PATCH ASSURES THAT IF THERE IS A FILE IN THE DISK DIRECTORY BY THE NAME "0000000"/"0000000", THEN AFTER A COOL START THIS FILE WILL BE PICKED UP AS THE INTRINSICS FILE.

CHANGE NO. 108 (2 CARDS).

THIS PATCH ALLOWS THE TSSMCP TO COMPILE WITHOUT AUXMEM SET TRUE.

CHANGE NO. 109 (2 CARDS).

THIS PATCH CORRECTS AN INVALID INDEX IN CONTROL STATE.

CHANGE NO. 110 (7 CARDS).

THIS CHANGE CORRECTS AN ERROR WHICH CAUSED THE SEGMENTED SAVE AREAS USED TO HOLD THE "NO MEM" AND "OK MEM" MESSAGES TO BE LEFT IN USE. OVER AN EXTENDED PERIOD OF TIME THIS COULD REQUIRE THAT MORE SPACE BE OBTAINED FOR SEGMENTED SAVE AREAS, EXACERBATING THE NO MEM SITUATION. THIS ERROR WAS INTRODUCED IN PATCH XV.2.33

CHANGE NO. 111 (1 CARD).

THIS CHANGE CORRECTS A CALL ON THE PUNT PROCEDURE IN PROCEDURE WAITIO. THE INCORRECT CALL CAUSED GARBAGE TO BE PRINTED FOR THE REASON IN THE "=SYS HANG" MESSAGE INSTEAD OF "UNEXP I/O ERR". THIS ERROR WAS INTRODUCED IN PATCH XV.3.14.

CHANGE NO. 112 (2 CARDS).

THIS CHANGE CORRECTS AN ERROR IN PATCH XV.2.24 WHICH COULD CAUSE THE MCP TO FAIL TO AWAKEN THE PROGRAM PROPERLY, AS A RESULT THE JOB WOULD BE DS=ED FOR "EXCESS TIME".

CHANGE NO. 113 (1 CARD).

THIS CHANGE CORRECTS AN ERROR WHICH SOMETIMES CAUSED A SEGMENT OF DISK TO BE OVERWRITTEN WITH INFORMATION BEGINNING AT WORD 2 OF MAIN

MEMORY.

CHANGE NO. 114 (14 CARDS).

THIS CHANGE CORRECTS PROBLEMS ASSOCIATED WITH RE-USING MEMORY AREAS OBTAINED ABOVE THE FENCE DURING THE SELECTION PROCESS. IN PARTICULAR, THE ARRAYS "SEGO" AND "LBL" (LOCAL TO SELECTRUN) ARE RE-INITIALIZED FOR EACH SELECTION CANDIDATE OBTAINED FROM THE SHEET.

CHANGE NO. 115 (8 CARDS).

THIS CHANGE CORRECTS AN ERROR IN PATCH XV.2.26 WHICH CAUSED THE BOJ AND EOJ MESSAGES FOR "PRNPBT/DISK" AND "LDCNTRL/DISK" TO BE OMITTED FROM THE LOG IF THE AUTOMESS OPTION WAS NOT SET. NOW THESE MESSAGES WILL APPEAR IN THE LOG REGARDLESS OF THE SETTING OF THE AUTOMESS OPTION.

CHANGE NO. 116 (1 CARD).

THIS CHANGE CORRECTS AN ERROR IN PATCH XV.2.04 WHICH CAUSED ERRORS IN THE QUEUEING OF THE SEGMENTED SAVE AREAS. THIS RESULTED IN A SYSTEM HANG DUE TO "=DATACOM INVALID LINK".

CHANGE NO. 117 (3 CARDS).

THIS PATCH CORRECTS AN INTERLOCKING PROBLEM WHICH CAUSED ERRORS IN THE I/O QUE IF A PARITY RETRY WAS DONE ON A TAPE LABEL. THIS OCCURRED MOST OFTEN DURING A PG.

CHANGE NO. 118 (8 CARDS).

THIS CHANGE CORRECTS AN INTERLOCKING PROBLEM IN THE USE OF PUTORTAKE WHICH ALLOWED A JOB'S TABLES, SUCH AS THE PRT, TO BE ACCESSED BEFORE THEY WERE INITALIZED. THIS ERROR CAUSED PROCEDURE INDIANGIRL TO BE PERMANENTLY PUT ASLEEP AFTER A GSTATUS COMMAND, THUS NECESSITATING A HALT/LOAD.

CHANGE NO. 119 (4 CARDS).

THIS PATCH CORRECTS AN INTERLOCKING PROBLEM. A "PB" OF A TAPE CAUSED ERRORS IN THE IOQUE.

CHANGE NO. 120 (1 CARD).

THIS CHANGE CORRECTS AN ERROR WHICH CAUSED THE FPB TO BE SHIFTED BY ONE WORD ON SHAREDISK SYSTEMS.

CHANGE NO. 121 (4 CARDS).

THIS CHANGE CORRECTS AN ERROR IN THE NEWLOGGING OPTION WHICH ALLOWED A JOB ON A 2 PROCESSOR SYSTEM TO BE INITIATED WITHOUT STARTING ITS LOGGING.

CHANGE NO. 122 (2 CARDS).

THIS PATCH CORRECTS A PROBLEM IN PROCEDURE BACKCLOSE WHICH OCCURRED WHEN CLOSING THE PBD FILES OF A PROGRAM. THE VARIABLE "J" WAS USED TO HOLD THE PBD NUMBER. J, HOWEVER, IS AN INTEGER, AND IF THE PBD NUMBER GOT TO 8000001 OR MORE, STRANGE THINGS WOULD RESULT.

CHANGE NO. 201 (1 CARD).

THIS PATCH ADDS THE SYSTEM NUMBER TO THE RESULTS OF THE SEARCH.

CHANGE NO. 202 (5 CARDS).

THIS CHANGE CAUSES THE RESULT DESCRIPTOR OF EACH I/O TO BE STORED INTO M[@153+I/O CHANNEL NUMBER].

CHANGE NO. 203 (25 CARDS).

THIS PATCH ALLOWS CELL ZERO TO BE MONITORED FOR INVALID WRITES (AFTER INITIALIZE). IN ORDER TO ENABLE THIS, A NEW TOGLE IS USED, MEMTOG, RATHER THAN M[0].[17:1], TO INTERLOCK MEMORY BELOW THE FENCE. WITH THIS PATCH, REFERENCE TO STOREDY MUST BE MADE AS "STOREDY(MIX, TOG);", WHERE MIX IS THE MIX INDEX OF THE PROCESS AND TOG IS EITHER

0 OR 1.

CHANGE NO. 204 (29 CARDS).

THIS CHANGE IS PROVIDED FOR DEBUGGING PURPOSES AND CAUSES THE MCP TO HANG IN A "DO UNTIL FALSE" LOOP WHENEVER DISK SEGMENT ZERO IS ABOUT TO BE UNEXPECTEDLY OVERWRITTEN.

CHANGE NO. 301 (3 CARDS).

THIS PATCH ALLOWS THE READING OF PURE BINARY CARD INPUT. IF THE FILE IS DECLARED AS ALPHA WITH A BUFFER LENGTH OF 20 WORDS. ALSO THE CARD READER WILL BE MARKED SAVED WHEN THE PROGRAM CLOSES THE FILE. CARE SHOULD BE TAKEN WHEN USING THIS FEATURE SINCE A "QEND" CARD WILL NOT BE SEEN BY THE SYSTEM. IT IS THE PROGRAM-S RESPONSIBILITY TO DETECT WHEN THE END OF THE FILE HAS OCCURRED.

CHANGE NO. 302 (49 CARDS).

THIS PATCH IMPLEMENTS THE EOF BRANCH IF "QEND" IS TYPED TO A REMOTE JOB AS INPUT. ALSO THE PARITY LABEL WILL BE TAKEN IF DATA IS NOT PRESENT AND A ZERO TIME OUT WAS SPECIFIED.

INTRINSICS CHANGES.

CHANGE NO. 101 (7 CARDS).

THIS PATCH CORRECTS A PROBLEM, WHEREIN, IF THE ALGOL FILE ATTRIBUTE FOR A NOT OPEN, LOCKED FILE WAS INTERROGATED, THE VALUE RETURNED WOULD BE ZERO.

CHANGE NO. 102 (5 CARDS).

THIS PATCH FORMATS THE FORTRAN ERROR MESSAGES CORRECTLY.

CHANGE NO. 103 (2 CARDS).

THIS PATCH CORRECTS A CONDITION THAT CAUSED E-TYPE-FORMATS TO OUTPUT "*"-S, INSTEAD OF CONVERTING THE FIELD.

CHANGE NO. 104 (14 CARDS).

THIS PATCH CORRECTS BACKWARD TABBING ON THE SAME PRINT LINE FOR BASIC PROGRAMS.

CHANGE NO. 105 (1 CARD).

THIS PATCH CORRECTS THE FORMATTING OF STRING CHARACTERS WHEN USING SEMICOLONS IN BASIC PRINT STATEMENTS.

CHANGE NO. 106 (1 CARD).

THIS PATCH PREVENTS A SYSTEM HANG CAUSED BY THE INTRINSIC COBOLIO TRYING TO DO PROTECT (F,P,M,) I/O TO CARD READER FILES WHEN THE SYSTEM IS OPERATING UNDER "LDCNTRL/DISK".

CHANGE NO. 201 (024 CARDS).

THIS PATCH IMPLEMENTS THE "QEND" FEATURE FOR THE INTRINSICS. ALSO A ZERO TIME OUT READ IS IMPLEMENTED.

CHANGE NO. 301 (244 CARDS).

THIS PATCH IMPLEMENTS THE INTRINSICS PORTION OF THE BASIC PRINT USING FEATURE.

ALGOL CHANGES.

CHANGE NO. 201 (4 CARDS).

THIS PATCH CORRECTS A PROBLEM WHERE A PATCH CARD WAS LOST WHEN BEGIN END PAIRS WERE NOT MATCHED AND PATCH CARD SEQUENCE NUMBERS WERE GREATER THAN THE SEQUENCE NUMBER OF THE "END." CARD IN THE SOURCE FILE.

CHANGE NO. 202 (13 CARDS).

THIS PATCH CORRECTS AN EOF NO LABEL ENCOUNTERED WHEN THE SOURCE "END." CARD IS PATCHED OVER AND THE PATCH DECK CONTAINS CARD SEQUENCE NUMBERS GREATER THAN THE SEQUENCE NUMBER OF THE "END." CARD IN THE SOURCE FILE.

COBOL CHANGES.

CHANGE NO. 101 (2 CARDS).

THIS CHANGE FLAGS THE CONSTRUCT "PICTURE IS S" AS A FATAL SYNTAX ERROR.

CHANGE NO. 102 (2 CARDS).

THIS CHANGE CORRECTS A STACK OVERFLOW FROM OCCURRING WHEN MOVING TO COMP TABLES.

CHANGE NO. 103 (3 CARDS).

THIS PATCH CORRECTS THE CODE GENERATED FOR THE INVALID KEY SYNTAX WHEN WRITING SEQUENTIAL DISK FILES THAT CONTAIN AN ACTUAL KEY CLAUSE IN THE FILE DESCRIPTION.

CHANGE NO. 104 (3 CARDS).

THIS PATCH CORRECTS THE COMPUTE VERB SO THAT THE RESULTS ARE ACCURATE.

COBOL68 CHANGES.

CHANGE NO. 101 (3 CARDS).

THIS PATCH PREVENTS A SYSTEM HANG WHEN DISPLAYING A SUBSCRIPTED ITEM.

CHANGE NO. 102 (3 CARDS).

THIS PATCH CAUSES A SYNTAX ERROR WHEN THE CONSTRUCT WRITE FROM <LITERAL STRING> IS USED. PREVIOUSLY THIS SYNTAXED AND AT EXECUTION TIME HUNG THE SYSTEM.

CHANGE NO. 103 (3 CARDS).

THIS PATCH CORRECTS A PROBLEM WHEN MOVING TO A FIELD WITH PLUS OR MINUS EDITING (E.G., 99,99+ OR 99,99-). THE SIGN WAS ALWAYS SET POSITIVE, BUT WILL NOW BE PROPERLY HANDLED.

CHANGE NO. 104 (3 CARDS).

THIS PATCH CORRECTS A PROBLEM WITH B-INSERTION. PREVIOUS TO THIS PATCH, A "B" WAS NOT COUNTED IN THE SIZE OF AN ITEM. THIS COULD CAUSE AN INVALID LINK.

CHANGE NO. 105 (3 CARDS).

THIS PATCH CORRECTS A PROBLEM WITH THE CONSTRUCT CLOSE WITH CRUNCH.

BASIC CHANGES.

CHANGE NO. 301 (122 CARDS).

THIS PATCH IMPLEMENTS THE PRINT USING FEATURE. INTRINSICS PATCH XV. 3.301 MUST BE IMPLEMENTED CONCURRENTLY.

FORTRAN CHANGES.

CHANGE NO. 101 (1 CARD).

THIS PATCH CORRECTS A FORMAT ERROR WHICH OCCURRED IF THE ONLY LIST ITEM REQUIRED WAS FOR A VARIABLE FORMAT PHRASE.

CHANGE NO. 102 (2 CARDS).

THIS PATCH WILL ALLOW THE NEW TAPE FILE TO HAVE THE SAME MFID AND FID AS THE TAPE FILE.

TSPOL CHANGES.

CHANGE NO. 201 (4 CARDS).

THIS PATCH CORRECTS A PROBLEM WHERE A PATCH CARD WAS LOST WHEN BEGIN END PAIRS WERE NOT MATCHED AND PATCH CARD SEQUENCE NUMBERS WERE GREATER THAN THE SEQUENCE NUMBER OF THE "END." CARD IN THE SOURCE FILE.

CHANGE NO. 202 (13 CARDS).

THIS PATCH CORRECTS AN EOF NO LABEL ENCOUNTERED WHEN THE SOURCE "END." CARD IS PATCHED OVER AND THE PATCH DECK CONTAINS CARD SEQUENCE NUMBERS GREATER THAN THE SEQUENCE NUMBER OF THE "END." CARD IN THE SOURCE FILE.

XALGOL CHANGES.

CHANGE NO. 201 (4 CARDS).

THIS PATCH CORRECTS A PROBLEM WHERE A PATCH CARD IS LOST WHEN BEGIN END PAIRS ARE NOT MATCHED AND PATCH CARD SEQUENCE NUMBERS ARE GREATER THAN THE SEQUENCE NUMBER OF THE "END."CARD IN THE SOURCE FILE.

CHANGE NO. 202 (13 CARDS).

THIS PATCH CORRECTS AN EOF NO LABEL ENCOUNTERED WHEN THE SOURCE "END." CARD IS PATCHED OVER AND THE PATCH DECK CONTAINS CARD SEQUENCE NUMBERS GREATER THAN THE SEQUENCE NUMBER OF THE "END." CARD IN THE SOURCE FILE.

CANDE CHANGES.

CHANGE NO. 101 (1 CARD).

THIS PATCH CORRECTS AN ERROR THAT WOULD ALLOW TWO OR MORE JOBS TO BE ASSIGNED TO A TERMINAL AT THE SAME TIME. THE ERROR WOULD OCCUR IF AN INVALID "TO" MESSAGE WAS ENTERED.

TSDUMP CHANGES.

CHANGE NO. 101 (001 CARD).

THIS PATCH ALLOWS "TSDUMP/ANALYZE" TO PRINT THE CORRECT LEVEL AND SUBLEVEL OF THE TSS/MCP BY READING IN THE CORRECT VALUES FROM TSS/PRT.

DUMPANL CHANGES.

CHANGE NO. 101 (1 CARD).

THIS PATCH ALLOWS "DUMPANL/UTILITY" TO PRINT THE CORRECT LEVEL AND SUBLEVEL OF THE MCP/DISK BY READING IN THE CORRECT VALUE FROM PRT/SAVE.

CHANGE NO. 102 (10 CARDS).

THIS PATCH PRINTS OUT THE READQUE.

COOL CHANGES.

CHANGE NO. 101 (9 CARDS).

THIS PATCH WILL NOT ALLOW A FILE THAT HAS A DISK ADDRESS OF LESS THAN DIRECT + 4, TO BE CREATED DURING A COLD START.

CHANGE NO. 102 (2 CARDS).

THIS PATCH FIXES A PROBLEM WHERE RECORD SIZE AND BLOCK SIZE WERE NOT BEING USED IN COMPUTING THE EOF POINTER FOR COLD START FILES. IT WAS ALWAYS BEING SET AS THE NUMBER OF SEGMENTS, EVEN WHEN THE NUMBER OF RECORDS WAS AVAILABLE.

CHANGE NO. 103 (2 CARDS).

THIS PATCH FIXES A MINOR PROBLEM WHICH CAUSED A COOL START TO INDICATE THAT DIRECTOR*TOP MIGHT BE BAD AND RESET THE PBD NUMBER TO 1 WHENEVER IT WAS GREATER THEN 99. IT CAN LEGALLY RUN UP TO 9999, BUT IS STORED IN CHARACTER FORM, NOT AS AN INTEGER.

CHANGE NO. 104 (018 CARDS).

THIS PATCH CORRECTS A PROBLEM WHICH OCCURRED WHEN COOL STARTING AND THE OPERATOR DID NOT WANT TO REMOVE PSEUDO-DECKS ON DISK. PREVIOUSLY, THE DECKS COULD NOT BE RUN NOR REMOVED. THIS CAUSED DUP LIBRARY CONDITIONS FOR "LDCNTRL/DISK".

CHANGE NO. 105 (009 CARDS).

THIS PATCH ALLOWS COOL/START TO DETERMINE IF ANYTHING WAS ACTUALLY WRITTEN ON THE LINE PRINTERS BEFORE HE SPOUTS THE MESSAGE "CHECK PRINTER FOR OUTPUT".

CHANGE NO. 106 (001 CARD).

THIS PATCH RESETS ALL OF THE OPTIONS IN THE MCP SO THAT ANY OPTIONS

CAN BE SET WHEN COOL STARTING.

DCFILL CHANGES.

CHANGE NO. 101 (001 CARD).

THIS PATCH PUTS THE CORRECT MCP LEVEL INTO PRT/SAVE SO THAT "DUMPANL/UTILITY" WILL FIND THE RIGHT LEVEL WHEN HE LOOKS OUT ON DISK.

TSFILL CHANGES.

CHANGE NO. 101 (001 CARD).

THIS PATCH PUTS THE CORRECT MCP LEVEL INTO TSS/PRT SO THAT "TSDUMP/ANALYZE" WILL FIND THE RIGHT LEVEL WHEN HE LOOKS OUT ON DISK.

ROTO CHANGES.

CHANGE NO. 101 (011 CARDS).

THIS PATCH LISTS THE I/O CHANNELS USED.

APPENDIX A - WORKING SET

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XREF PROGRAM OF 3DC70 THIS LISTING PRODUCED 22 JUL 1974 TIME 8.51

$ CARD DOCUMENT FINAL DOCONLY SIX SINGLE

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