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SUBJ: Current State of Public Commands
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Introduction

A document tape for commands is available. Appendix A is a list of the commands which are included on the tape. Other commands will be added as information becomes available.

Conventions for staff-maintained public commands have been established, including availability of symbolic decks, maintenance of the document tape, and guidelines for creating new commands. Commands to be added to the document tape should be submitted to the maintenance group, either in conventional form or with information describing the special approach.

Conventions described are neither final nor ideal. They exist.

Approach

All symbolic decks for commands are in COMFIL 1 at the Computation Center; BCD listings for each deck, and storage maps (file XXXXX MAP) for each command, are included in both COMFIL 3 and on a command document tape for off-line printing.

Since the COMFIL's contain the same information for both the supervisor and the system library, a convention has been adopted to prevent duplication of names; the number of characters in the primary name of a file determines its function, with 4 characters used for system library, 5 characters for commands, and 6 characters for supervisor. Names are truncated or right-padded with zeroes for commands.

The COMFIL's at the Computation Center will include only those commands which have been submitted to the maintenance group for inclusion on the document tape. Decks for commands currently being revised, not thoroughly debugged, etc., may be kept in the COMFIL's at MAC but no conventions have been established. Authors will be responsible for all decks until they are turned over to the maintenance group, when conventions described here will apply.

Symbolic decks for commands all have secondary names FAP or MAD, where FAP decks are either fixed length or line-marked (SQUASHed). The purpose is to permit assembly or compilation directly. For editing purposes, a PRINT or PRBIN could be used to determine the type of file, but at present most FAP decks are in fixed length format and no conventions have been established.

A file COMND INFO will be maintained in COMFIL 3, listing changes made between updates of the document tape. This will normally include only the date and the name of the file changed, but may include limited coding information about the changes (e.g. a FAP code replaced by a MAD code; new commands added to the document tape).

Command Library

To simplify loading procedures, all non-library subroutines called by commands have been placed in a command library, XLIBE BSS, in COMFIL 2 at Computation Center and COMFIL 4 at MAC, which includes subroutines unique to a particular command as well as true "library" subroutines shared by several commands.

Note that the purpose is not only the normal library function (to avoid duplicate copies of BSS files), but also ease of maintenance, and conventions have been established for special cases. When a command requires its own version of, say, CHNCOM (normally either a supervisor entry or the system library version), the entry name has been changed to CHNCM1 and the special version entered in the command library.

Primary names for the command library files are all 5 character names beginning with X, hence only 4 characters are mnemonically meaningful; the special CHNCOM file would be assigned the primary name XCHNC. File names currently used for the command library are listed in Appendix A.

Special Subroutines

Normal exit from a command is a call to CHNCOM, usually with argument zero (dead if no waiting command).

Error exits should provide an option to a user who is executing a chain of commands via RUNCOM; he should be permitted to continue the chain if the error is not fatal. A subroutine, BRAKE, provides this option and should be used for error exits from commands. Calling sequence is:

EXECUTE BRAKE.

where BRAKE examines the command list for any waiting commands. If one is found, a message

TYPE 'START' TO GO ON

is printed on the console, and the user's response then either terminates the chain (START not typed) or continues it. Return from BRAKE (either no waiting command or else START typed) is to 1,4, and the next statement in the command is normally a call to CHNCOM.

Error exits can also occur from system library subroutines as calls to EXIT, ENDJOB, or SNAP, and a special subroutine containing these entry points is provided for commands. It prints a message "XXXX CALLED", then calls BRAKE before going dead via CHNCOM. It also includes a dummy entry (TRA 1,4) to subroutine .SETUP, so this subroutine is normally loaded (see next) before the system library is searched.

Command Creation

Normal loading procedure for commands is

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XLOAD _____ (LIBE) XLIBE
SAVE NAME
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where XLOAD is one of the public commands (L, LDABS, LOAD, VLOAD or NCLOAD). This ensures loading of the special EXIT routines for all MAD-coded commands; a main program always calls .SETUP, and an EXTERNAL FUNCTION includes EXIT in the transfer vector. FAP - coded programs should include a call to .SETUP for the same reason; the special subroutine will be loaded before the system library is searched.

Loading information may be provided either by a copy of the LOAD command string, or by providing a file XXXXX MAP of the storage map (obtained using STOMAP in the public files). Any special procedures (special BSS loaders, approach other than LOAD-SAVE) require complete instructions.

Symbolic Decks

For each file included in the LOAD argument list, a symbolic deck must be provided. If the secondary name for each file is either FAP or MAD, no further information is required. If the file has been CRUNCHED, SQUOZE, or otherwise transformed, or if other types of files are used, then complete instructions should be provided. The maintenance group will assign 5 character names and update the command library and COMFIL's.

Comment

Despite much propaganda to the contrary, programs written in MAD do need remarks. Lots of them.

Appendix A

Attached is a print out of file COMND BCD in COMFIL 3, which is the first page of print out for the command document tape. Changes in COMND BCD will be noted in file COMND INFO as, for example,

6/14/65 COMND BCD

FILE ADDED. XXXXX MAD FOR COMMAND XXXXX

where the first line is a standard entry in COMND INFO, the second line is the "limited coding information".

COMND BCD - M1416 3212 - CTR1H3 - JUL 13, 1965 - 1545.7

DOCUMENT TAPE FOR COMMANDS, MAY, 1965.

TSSRBS

BSS LOADER FOR SUPERVISOR

THEN LISTINGS INCLUDING STORAGE MAP FOR EACH COMMAND

COMMAND NAME FILE NAMES

CHMODE CHMOD MAD

DELETE

RENAME

COMBIN CMBMN FAP COMBI MAD

COMFIL COMFI MAD

COPY COPY0 MAD

EXTBSS EXTBS MAD

FAP FAP00 FAP PLUS 12 FILES FOR INSERT,
FAP. 1 FAP THROUGH FAP.12 FAP
(PRINT FAP 0 FAP FOR INFO).

FILE FILE0 FAP

GENCOM GENCO MAD

INPUT INPUT FAP

EDIT

L L,LOD FAP (PRINT BEGINNING FOR INFO)

LISTF LISTF FAP

LOAD L,LOD FAP (PRINT BEGINNING FOR INFO)

LOADGO

VLOAD

NCLOAD

LOG LOG00 MAD

LOGIN LOGIN FAP

PRBIN PRBIN MAD

PRBSS PRBSS MAD

PRINT PRINT MAD

PRINTF PRINF FAP

REMARK REMAR MAD

RQUEST RQUES MAD

RUNCOM RUNCO MAD

SD SD000 MAD

SDUMP SDUMP FAP

SP SP000 MAD

SPLIT SPLMN FAP SPLIT MAD

TFILE TFILE FAP

UPDATE UPDAT MAD

UPDBSS UPDBS MAD

SMBSS MAD

ENTRY POINT SMBSS FOR BSS COMMANDS
(RELOCATES COMMON, SO LOAD IT FIRST)

THEN LISTINGS FOR COMMAND LIBRARY, XLIBE BSS

FILE NAME	ENTRY POINTS
XABSO MAD	ABS
XADDC FAP	ADD DEC
XAPAT MAD	APAT
XBRAK FAP	BRAKE
XBRFL FAP	BRFIL BRTIT
XCOME FAP	COMFL1
XCOML FAP	COMLOC COMNAM
XCONV FAP	CTIME TCTIME DTBC BTDC OTRC BTOC
XCOPF FAP	COPFIL
XDADV FAP	DA DXV DV
XDAYT FAP	DAYTIM
XDLOC FAP	DLOC
XDRDF FAP	DUMRDF
XENTR MAD	ENTRY
XGCOM FAP	XECOM1
XIDUS FAP	IDUSER
XLDFD FAP	LDFDIR
XLDFL FAP	LDFIL
XLSRS FAP	LS RS
XMNEM FAP	MNEM
XOCTD FAP	OCTDMP
XPAKD FAP	PAKDAY
XPROG MAD	PROG
XRPAT MAD	RPAT
XSEQO FAP	LSEQ SEQNC STSQ
XSIDO FAP	SID STA STD STI STP STT
XSIGN MAD	SIGNED
XSNEX FAP	EXIT ENDJOB SNAP .SETUP
XSTMA MAD	STMAP
XTDEC FAP	TDEC TOCT
XZZZ) FAP	ZZZ