

CTSS BULLETIN 86

SURJ: Modifications to the Standard Library

DATE: August 6, 1965

Concurrent with the introduction of the new file system (MAC2A1 and CTR2A1), a set of write-arounds will be maintained within the A-core supervisor. These write-arounds will allow old file system calls (e.g., .SEEK, .READK, etc.) to be used, thereby facilitating the changeover. Inasmuch as is possible, these write-arounds re-format the old file calls into the form expected by the new system. (Reference to CTSS Bulletin 83 explains the method and limitations in greater detail.)

Due to severe limitations on available core space within the supervisor, these write-arounds will only be maintained until October 1. At that time, the write-arounds will be removed from A-core. Thereafter, all programs which employ supervisor file calls of the form:

```
TSX      NAME,4
  .
  .
  .
NAME TIA  =HNAME
```

will result in Protection Mode Violations due to the absence of the old file entry points. All the entries which are being deleted are noted on the last page of this bulletin.

In light of the above remarks, it behooves the user to examine his programs and edit them to be compatible with the new file system. There are two ways in which this can be done.

The first way involves the smaller effort although at the expense of a slightly larger program. The system library (TSLIB1 BSS in comfil 5) will always contain the old file entry points. In the current system, these entry points are simple TIA's to the supervisor. However, the new TSLIB1 will contain the write-arounds as a B-core package. Thus, to be compatible, all programs merely need to take out the

TIA's and declare the file calls to be external symbols via the EXTERN pseudo-operation in FAP. After reloading, the proper library will then route the calls to the supervisor.

Until October 1, TSLIB4 will contain the supervisor entry points as TIA's. This is being done to aid the user during the transition period. Shown below is a sample conversion:

<u>OLD PROGRAM</u>		<u>NEW PROGRAM</u>	
TSX	.ASIGN,4	EXTERN	.ASIGN
PZE	FILNAM		
		o	
		o	
		o	
		TSX	.ASIGN,4
		PZE	FILNAM
.ASIGN	TIA	=H.ASIGN	

Notice that the effect of the new program will be unchanged in the present system. However, the new system has a modified library such that the re-formatting of the .ASIGN file call occurs in B-core and then the supervisor is called with the new file calls. Thus, the program will run properly, regardless of which system is used. In addition, the removal of the A-core write-arounds cannot affect this program since the B-core library will call the new entry points in the supervisor.

The second method of conversion simply amounts to re-writing the program to use the new file calls. Many of the system commands, (e.g. MAD, FAP, LOAD, etc.) have been rewritten to take advantage of the greater flexibility and power of the new file system. Reference to CC-241-2 will provide ample information as to the calling sequences, etc. In addition, the new BFREAD, BFWRITE, etc. entry points in the new library provide a simplified method for getting adapted to the new file system. i

Following is a list of the routines which have been altered, and added to TSLIB1 (the standard library) and TSLIB4 and those routines which were deleted from TSLIB1 and replaced with the write-arounds along with any important changes.

Altered routines

- BREAD: Decreased by (30)8 locations. Uses Erasable Common. Calls BFREAD.
- (BST), (EFT), (RWT): Decreased by (13)8 locations.
- BWRITE: Increased by 5 locations. Uses Erasable Common. Calls BFWRITE and WRWAIT.

DELETE: Increased by (41)8 locations.
 DREAD: Increased by (21)8 locations. Calls BFREAD.
 DWRITE: Increased by (26)8 locations. Calls BFWRITE,
 WRWAIT.
 EOFEXIT, SETEOF, WRDCNT: Increased by (16)8 locations.
 GETCFN, GETCF: Decreased by (6)8 locations. Calls
 GNAM.
 RENAME: Increased by (46)8 locations.
 (SCH), (STH), (STHM), PUNCH, PNCHL, TAPWR: Increased
 by (36)8 locations.
 SEEK, ASSIGN, APPEND, ENDRD, FILE: Increased by
 (152)8 locations. Calls BFOPEN, OPEN and
 BUFFER.
 SETERR: Increased by 2 locations.
 SNAP: Increased by (12)8 locations.
 SRCH, BLK, FLK, ENDF, CLOUT: Increased by (40)8
 locations. Calls FRER and FRET ((237)8
 locations).
 (TSH), (TSHM), TAPRD: Increased by (11)8 locations.
 VREAD, VWRITE, FWRITE, SETVBF, SETVB: Increased by
 (54)8 locations. Calls BFWRITE, BFREAD and
 WRWAIT.

Routines which have been added

BFOPEN, BFREAD, BFWRITE, BFCODE, BFCLOS: (656)8
 locations
 CHFILE, DELFIL: 6 locations.
 FSTATE: 4 locations.
 IODIAG: 4 locations.
 LDFIL: (117)8 locations.
 T.V.: CLOSE, COLT, EXIT, FRER, FSTATE, OPEN,
 RDFILE
 MOUNT, UNMOUNT, VERIFY, LABEL, TAPFIL: (14)8
 locations.

OPEN, FCHECK, FWAIT, BUFFER, CLOSE, UPDATE: (16)8
 locations.

PRINTER: (1037)8 locations
 T.V.: IODIAG, WRFLX

RDFILE, RDWAIT: 6 locations.

RESETF, UNLINK: 5 locations.

SETPRI: 4 locations.

STORGE: 4 locations.

TILOCK, FERRTN: 5 locations.

TRFILE: 4 locations.

UPDMFD, DELMFD, ATTACH, RSFILE, MOVFIL, SETFIL, LINK,
 ALLOT: (22)8 locations.

WRFILE, WRWAIT: 5 locations

Changes in TSLIB1 only

Deleted: .RESET, .RENAM, .FSTAT, .FILDR: (12)8 locations.

.DELETE, .ENDRD, .ERASE, .READK, .SEEK: (14)8
 locations.

.FILE, .ASIGN, .WRITE, .APEND, .RELRW: (14)8
 locations.

.DUMP, .LOAD: 6 locations. *clear*

Replaced by: .WRITE, .DUMP, .LOAD, .ASIGN, .APEND, .RELRW,
 .SEEK, .READK, .READ, .FSTAT, .DELETE, .FILE,
 .RENAM, .RESET, .UPDAT, .ENDRD, .ERASE:
 (600)8 locations.

clear also