ASGPRO (ASSIGN A FILE CODE - LKM23)

Calling Sequence

A5: PCT address of calling program
A6: Scheduled Label, if any
A8: Pointer to user parameter block
A11: PCT address of D:USV1 or D:RMAC
A12: Return address (to D:USV1 or D:RMAC)
A13: CVT address

Work Areas and Tables

FCT (File Code Table)
DWT (Drive Work Table)
LFT (Logical File Table)
DCT (Disc Control Table)

A 6-word block in the Dynamic Allocation Area for use as work area and a 215-word block if disc I/O is necessary.

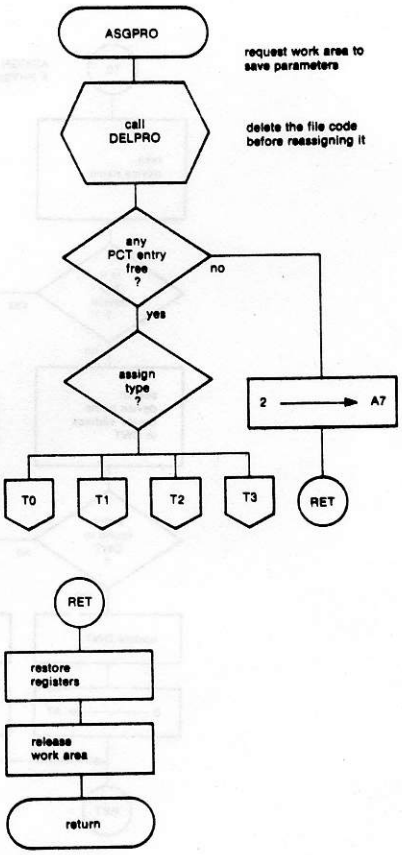
Input/Output Files

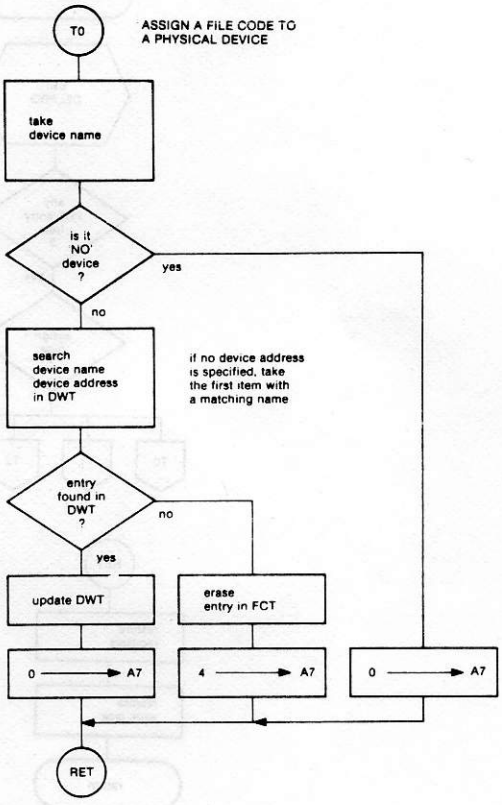
Disc is used to read in the directory or GRANTB.

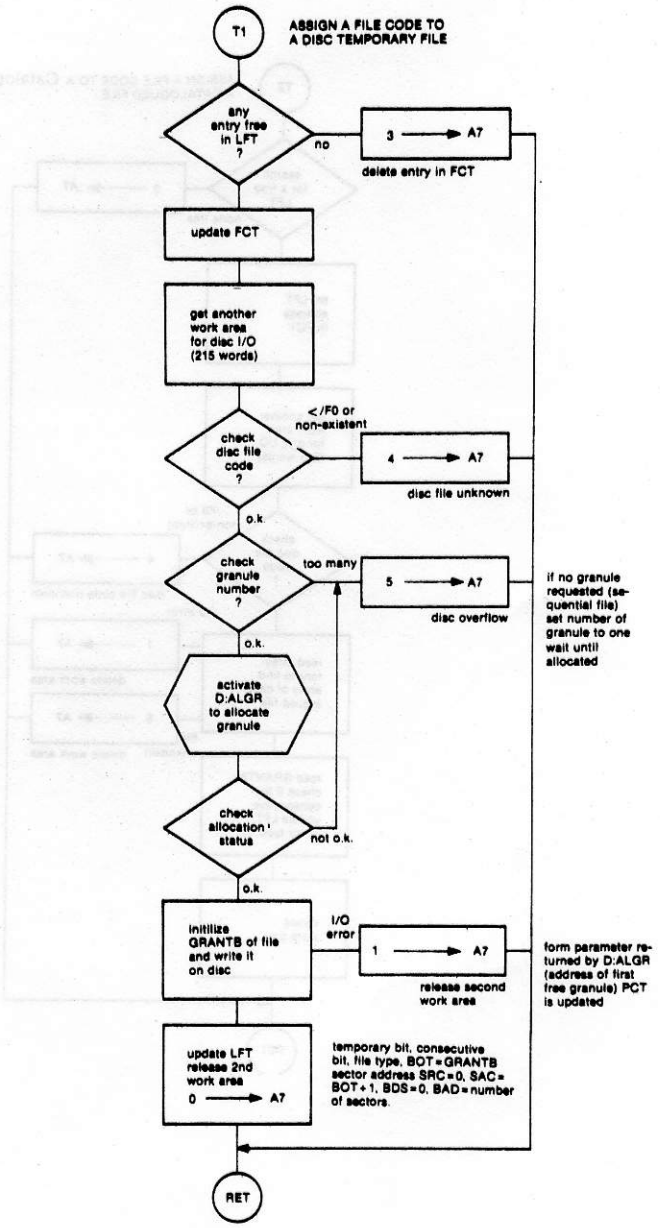
Functional Description

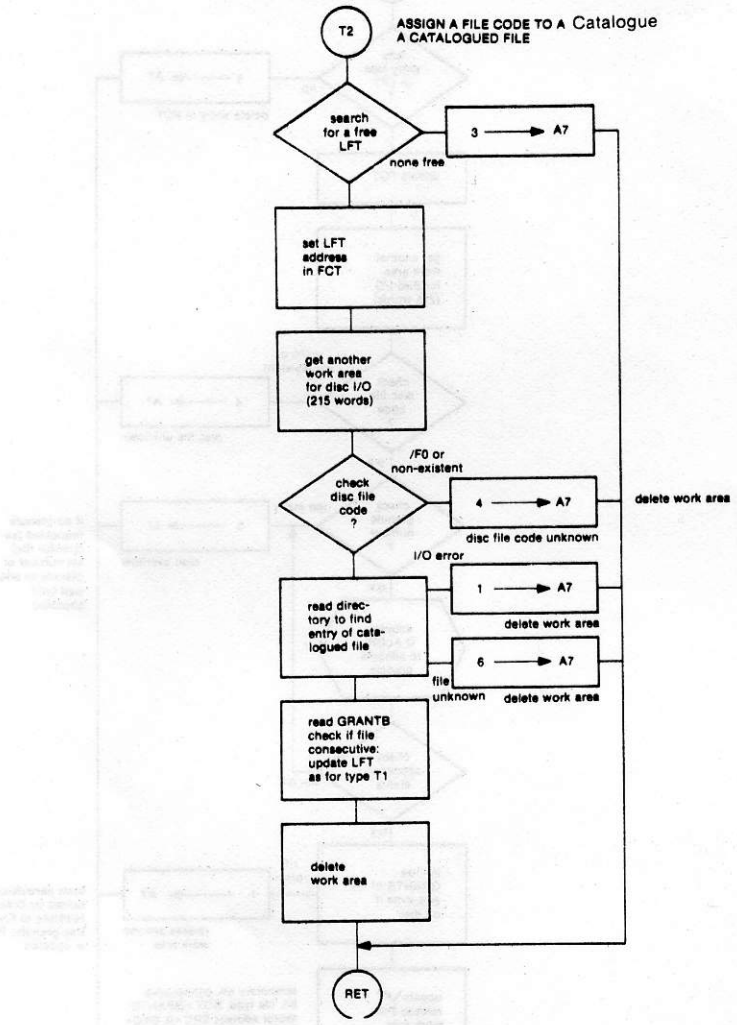
The action taken depends on the type of file code assignment
- for physical devices, the Device Work Table is updated
- for disc temporary files, the File Code Table is updated, any necessary granules are allocated, the granule table GRANT is initialized and the Logical File Table is updated.
- for catalogued files the LFT address is set in the File Code Table, the directory is scanned and, for consecutive files, the Logical File Table is updated.
- for equalizing file codes, the File Code Table is updated. If it is a disc logical file, ASCNT in LFT is incremented as well.

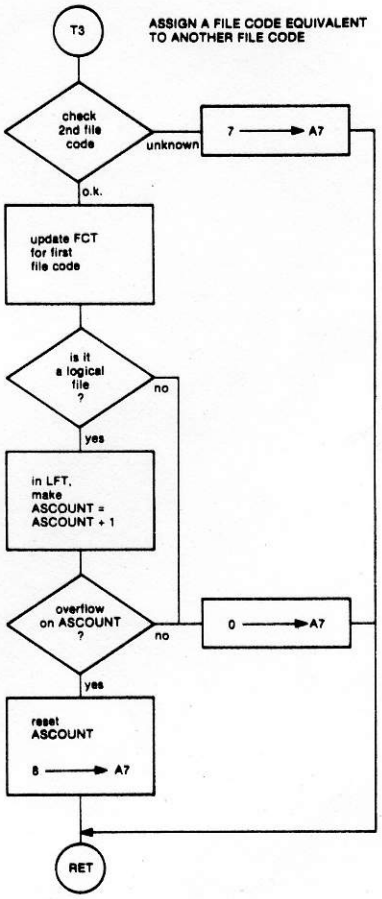
On return, registers A5, A6, A11 and A13 are not destroyed and A7 will contain the status of the operation.


ASGPRO
request work area to save parameters
call DELPRO
delete the file code before reassigning it
any PCT entry free ?
no
yes
assign type ?
2 → A7
T0
T1
T2
T3
RET
RET
restore registers
release work area
return


T0
ASSIGN A FILE CODE TO
A PHYSICAL DEVICE
take
device name
is it
'NO'
device
?
yes
no
search
device name
device address
in DWT
if no device address
is specified, take
the first item with
a matching name
entry
found in
DWT
?
no
yes
update DWT
erase
entry in FCT
0 → A7
4 → A7
0 → A7
RET


T1
ASSIGN A FILE CODE TO A DISC TEMPORARY FILE
any entry free in LFT ?
no
3 → A7
delete entry in FCT
update FCT
get another work area for disc I/O (215 words)
check disc file code ?
< /F0 or non-existent
4 → A7
disc file unknown
o.k.
check granule number ?
too many
5 → A7
disc overflow
if no granule requested (sequential file) set number of granule to one wait until allocated
o.k.
activate D:ALGR to allocate granule
check allocation status
not o.k.
o.k.
initilize GRANTB of file and write it on disc
I/O error
1 → A7
release second work area
form parameter returned by D:ALGR (address of first free granule) PCT is updated
update LFT release 2nd work area
0 → A7
temporary bit, consecutive bit, file type, BOT = GRANTB sector address SRC = 0, SAC = BOT + 1, BDS = 0, BAD = number of sectors.
RET


T2
ASSIGN A FILE CODE TO A Catalogue
A CATALOGUED FILE
search for a free LFT
none free
3 → A7
set LFT address in FCT
get another work area for disc I/O (215 words)
/F0 or non-existent
check disc file code ?
4 → A7
disc file code unknown
delete work area
I/O error
read directory to find entry of catalogued file
1 → A7
delete work area
6 → A7
file unknown
delete work area
read GRANTB check if file consecutive: update LFT as for type T1
delete work area
RET


T3
ASSIGN A FILE CODE EQUIVALENT TO ANOTHER FILE CODE
check 2nd file code
unknown
7 → A7
o.k.
update FCT for first file code
is it a logical file ?
no
yes
in LFT, make ASCOUNT = ASCOUNT + 1
overflow on ASCOUNT ?
no
0 → A7
yes
reset ASCOUNT
8 → A7
RET

DELPRO (DELETE A FILE CODE - LKM24)

Calling Sequence

A5: PCT address of calling program
A6: Scheduled Label, if any
A8: User parameter block address
A11: PCT address of D:USV1 or D:RMAC
A12: Return address (to D:USV1 or D:RMAC)
A13: CVT address

Work Areas and Tables

FCT (File Code Table)
LFT (Logical File Table)
DCT (Disc Control Table)

A 9-word block in the Dynamic Allocation Area for use as work area and a 215-word block if disc I/O is necessary.

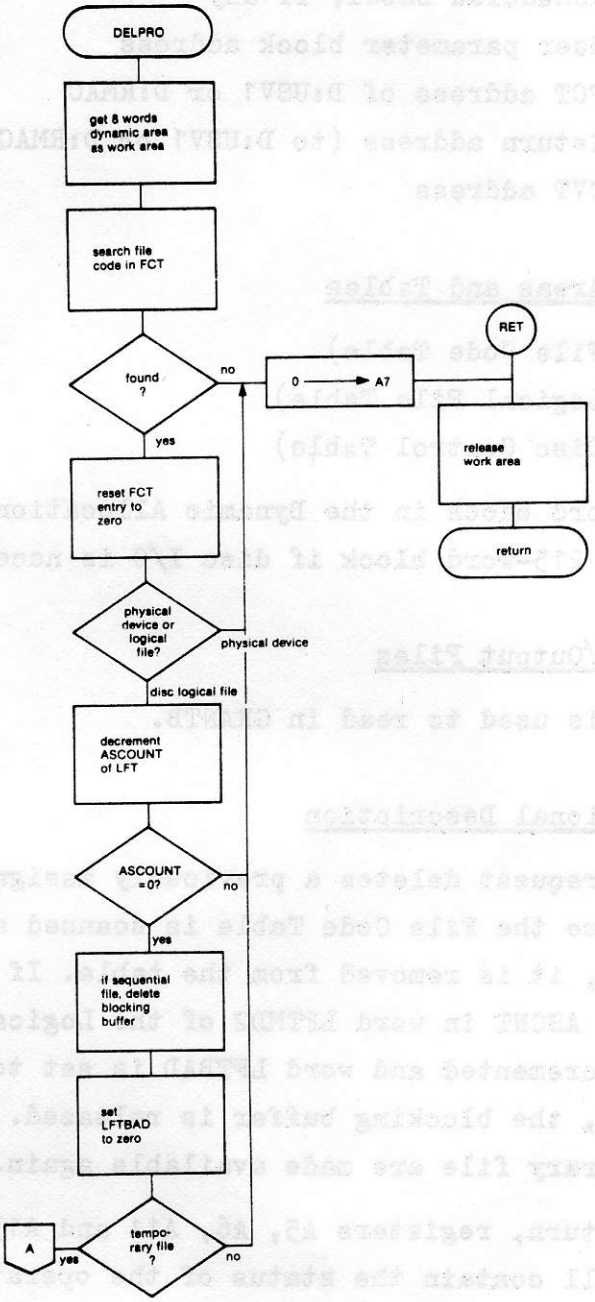
Input/Output Files

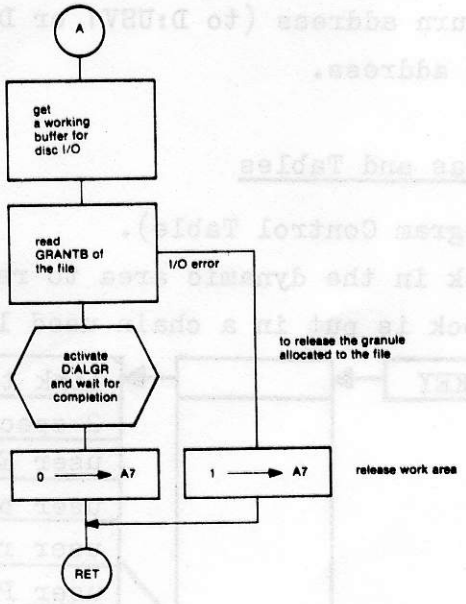
Disc is used to read in GRANTB.

Functional Description

This request deletes a previously assigned file code. For this purpose the File Code Table is scanned and if the file code is found, it is removed from the table. If it is a disc logical file code, ASCNT in word LFTMD2 of the Logical File Description table is decremented and word LFTBAD is set to zero. For sequential files, the blocking buffer is released. Granules allocated to a temporary file are made available again.

On return, registers A5, A6, A11 and A13 are not destroyed and A7 will contain the status of the operation.


DELPRO
get 8 words dynamic area as work area
search file code in FCT
found ?
no
0 → A7
RET
release work area
return
yes
reset FCT entry to zero
physical device or logical file?
physical device
disc logical file
decrement ASCOUNT of LFT
ASCOUNT =0?
no
yes
if sequential file, delete blocking buffer
set LFTBAD to zero
tempo-rary file ?
no
A
yes


A
get
a working
buffer for
disc I/O
read
GRANTB of
the file
I/O error
to release the granule
allocated to the file
activate
D:ALGR
and wait for
completion
0 → A7
1 → A7
release work area
RET

KEYPRO (READ AN UNSOLICITED KEY-IN - LKM25)

Calling Sequence

A5: PCT address of calling program

A6: Scheduled Label, if any

A7: User A7 (not used)

A8: User parameter block address

A4: A8 + 2

A11: PCT address of current program (D:USV1) where ECBACT contains the address of the event word on which the user is waiting.

A12: Return address (to D:USV1 or D:RMAC)

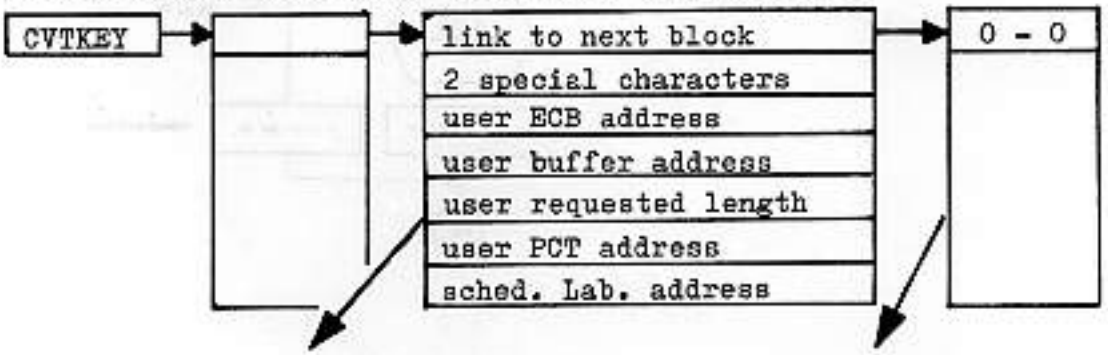
A13: CVT address.

Work Areas and Tables

PCT (Program Control Table).

One block in the dynamic area to record the request.

This block is put in a chain used later on by D:OCOM:



format of one block

chaining pointer of last entry = 0

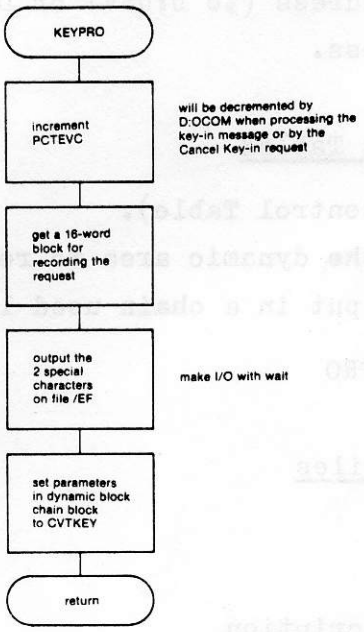
Input/Output Files

File Code /EF (normally the system typewriter) is used to output the 2 special characters specified by the request to inform the operator that he can enter his message.

Functional Description

When this request is given, the event count is incremented and a 16-word block is requested in the dynamic allocation area. The special characters defined by the user in a 5-word parameter

block are output on file code /EF. The user parameter block is chained to word CVTKEY of the Communication Vector Table.



CANKEY (CANCEL AN UNSOLICITED KEY-IN REQUEST - LKM26)

Calling Sequence

A5: PCT address of calling program
A6: Scheduled Label, if any
A7: User A7 (not used)
A8: User parameter block address
A4: A8 + 2
A11: PCT address of current program (D:USV1) where ECBACT contains the address of the event word on which the user is waiting.
A12: Return address (to D:USV1 or D:RMAC)
A13: CVT address.

Work Areas and Tables

PCT (Program Control Table).
One block in the dynamic area to record the request.
This block is put in a chain used later on by D:OCOM:

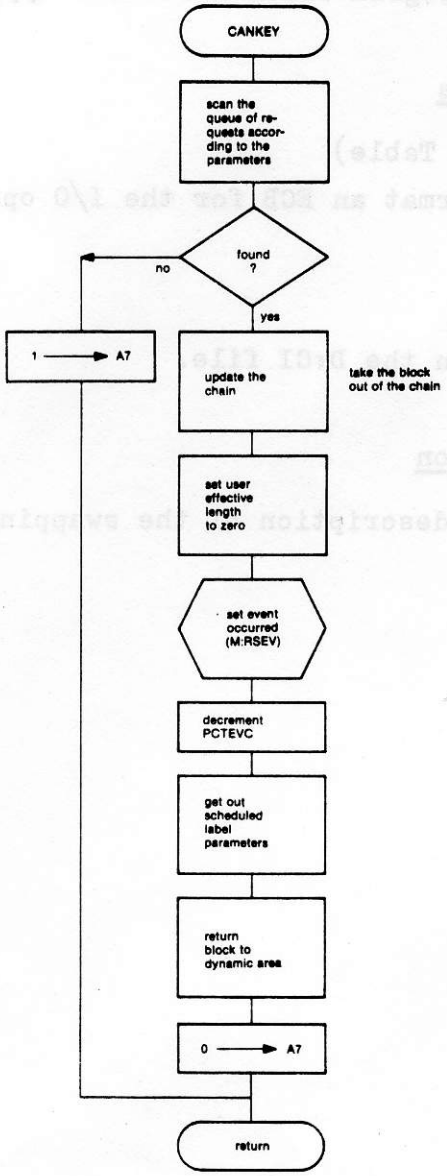
See under KEYPRO

Input/Output Files

None.

Functional Description

A previously requested unsolicited key-in must be cancelled if it is not used or not required. This involves finding the block with the request's special characters, the resetting of certain parameters, especially event counts, and releasing the block.
Register A7 countains the status of the request after completion: if 0, the operation was successful, if 1, it was not.


CANKEY
scan the queue of requests according to the parameters
found ?
no
yes
1 → A7
update the chain
take the block out of the chain
set user effective length to zero
set event occurred (M:RSEV)
decrement PCTEVC
get out scheduled label parameters
return block to dynamic area
0 → A7
return

D:SWP (SWAPPING MODULE)

Calling Sequence

This module is activated by the dispatcher every time a swappable program must be swapped out of the Swap Area in memory and written on disc in the D:CI file. It normally runs at level 49.
A3: PCT address of program which must be swapped out.

Work Areas and Tables

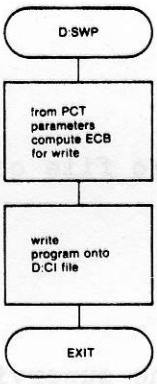
PCT (Program Control Table)
A 6-word block to format an ECB for the I/O operation.

Input/Output Files

This module writes on the D:CI file.

Functional Description

See page 2-17 for a description of the swapping procedure.


D:SWP
from PCT
parameters
compute ECB
for write
write
program onto
D:CI file
EXIT