

DATA BASE REALLOCATION PROCEDURE
PERIPHERAL DATA STORAGE PROCESSOR
2-WIRE NO. 1 ELECTRONIC SWITCHING SYSTEM

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1. GENERAL

1.01 This section provides the procedure required for reallocating or increasing the size of existing data base tables in the store of the peripheral data storage processor (PDSP) in the No. 1 2-Wire Electronic Switching System (ESS) office.

1.02 This section is reissued to include the 2A generic and Expanded 911 system (E911). Since this reissue is a general revision arrows ordinarily used to indicate changes have been omitted.

2. INTRODUCTION

2.01 There are two types of reallocation used to relocate data base tables in the main store. These are termed SIMPLE and COMPLEX.

2.02 The SIMPLE reallocation is used for the following:

- (a) Initial building of office parameter tables (OPT)

(b) When data base is moved to another location (see Fig. 1)

(c) Data base change

(d) Data base growth (Fig. 1).

2.03 The COMPLEX reallocation is used when the old generic is replaced and the new generic has items in different locations in the same table.

2.04 The SIMPLE reallocation may be made at the local level, but the COMPLEX reallocation *must* be performed by the installation division. The data base can be grown on a local level by SIMPLE reallocation, but the restructure (COMPLEX reallocation) can be done only with the appropriate transition generic.

2.05 The reallocation procedure can change the value of any of the entries in office parameter tables.

2.06 For enhanced private switching service (EPSCS) the tape cartridge format indicating the location of the generic and data base is shown in Fig. 2. Figure 3 is the cartridge format for E911 application.

3. SIMPLE REALLOCATION

3.01 The SIMPLE reallocation procedure must be performed during hours of light traffic and both processors and associated equipment must be operational.

3.02 The reallocation procedure (see Fig. 4) can be divided into the following six parts:

- (a) Compare the data base in memory with the data base on tape.

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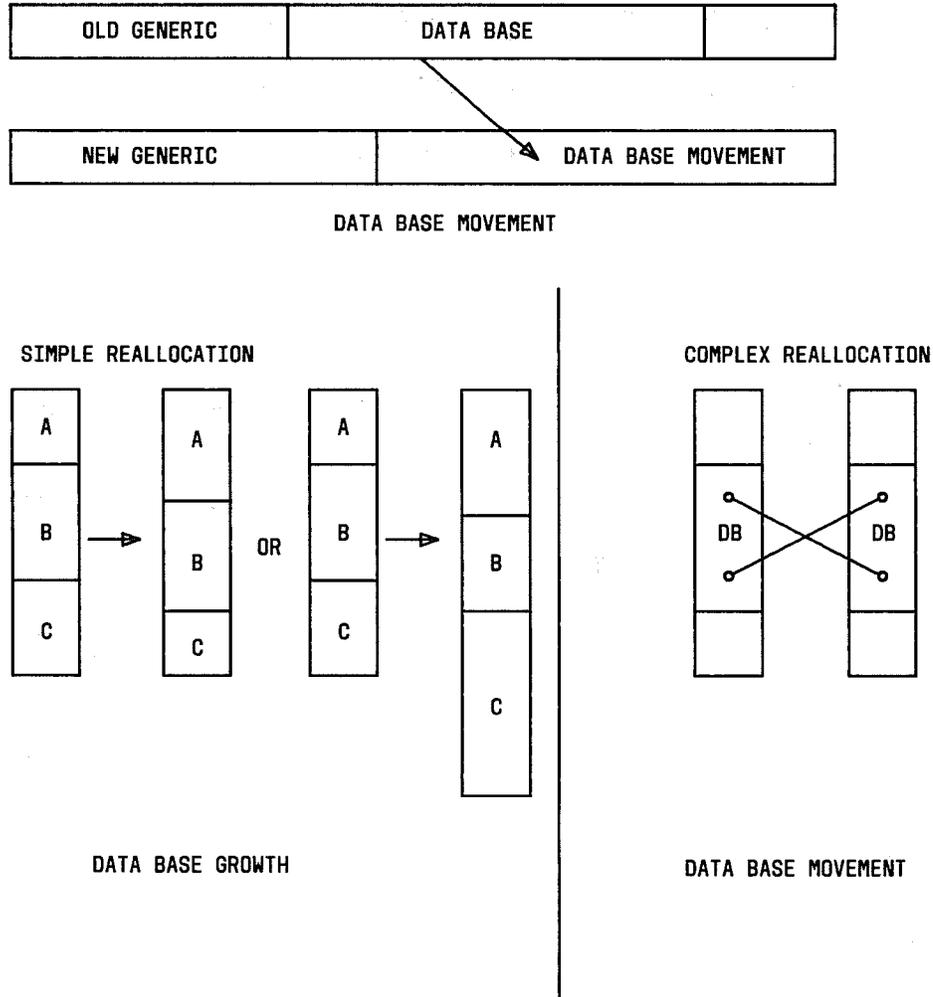


Fig. 1—Data Base Reallocation

- (b) Copy two tapes (this operation makes two backup copies of the tape).
- (c) Build the reallocated data base in off-line store.
- (d) Switch to off-line store.

- (e) Perform data checks.
- (f) Update tapes to agree with main store.

3.03 The complete procedure for simple reallocation is given in the steps that follow. For a concise procedure, see Fig. 4.

STEP	PROCEDURE
1	At the maintenance terminal, enter the following to prepare for reallocation as well as inhibit other terminals from inputting recent changes: ALW:DIST!

STEP

PROCEDURE

TAPE FILE		NUMBER OF BLOCKS*		NUMBER OF DATA WORDS/FILE**	
RESIDENT GENERIC		290		240120	
NONRESIDENT GENERIC		148		122544	
DATA BASE		400		331200	
PATCH		10		8280	

TAPE TRACKS					
3	DATA BASE 1-80				
2	BOOT-STRAP 1-3	MISC. 4-19	CHECK SUM 20	DIR 21	DATA BASE
1	BOOTSTRAP 0-3	MISC. 4-19	CHECK SUM 20	GENERIC 21-310	
4	NON-RESIDENT (PAGE MON) 21-168			PATCH 169-178	

NOTE: 4 WORDS IN EACH BLOCK ARE USED
FOR BLOCK NUMBER, LENGTH, ADDRESS,
DEOF, EOF, AND CRC

* BLOCKSIZE 832 - 345 BLOCK/TRACK

** DATA WORDS/BLOCK 828
828 USABLE WORDS

Fig. 2—PDSP Tape Cartridge Format For EPSCS

- 2 Compare the data base in main store with the data base on the tape by entering the following at the maintenance terminal:

CMPR:DB;DBFILE:ERROR n!

The n is the number of errors in a range from 1 to 10 that can occur before the comparison will end.

Note: If errors are found, use local office records to determine the correct data entries; then rectify using the same RC and verification procedure at the maintenance terminal.

- 3 Copy two additional tapes in order to have current backup tapes in the storage plan by removing two of the oldest tapes from the backup storage area. Remove the labels from

STEP	PROCEDURE
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TAPE TRACKS											
2	DATA BASE 1-80										
1	BOOT-STRAP 2 1-3	MISC. 2 4-10	CHECK SUM 21	DIR 22	DATA BASE 23-342						
0	BOOTSTRAP 0-3		MISC. 4-20	CHECK SUM 21	GENERIC 22-261						
3					NON-RESIDENT 22-169			PATCH 170-179	BACKDT 180		

* BLOCKSIZE 832 - 345 BLOCK/TRACK
 ** DATA WORDS/BLOCK 828
 BLOCK SIZE (BYTES) = 1664
 MAX BLOCK/TRACK = 345
 GENERIC = 240 LENGTH WITH A MAX

Fig. 3—PDSP Tape Cartridge Format For E911

the tape cartridges and relabel indicating the generic number and the date of the update. See the procedure for making extra copies of cartridges.

4 Rebuild OPT in scratch buffer in on-line memory by entering:

DIST:OPT/

xxx n/

.
.
.

TABLE A

BUILDING OFFICE PARAMETER TABLES

DIST:	OPT/
OPPDSP	aaa/
OPNEPS	aaa/
OPNUDLC	aaa/
OPNTLN	aaa/
OPNTNN	aaa/
OPNMDR	aaa/
OPNDLB	aaa/
OPCSACCI	aaa/
OPCSACCT	aaa/
OPHTFCT	aaa/
OPMATH	aaa/
OPNRPT	aaa/
OPNSCHD	aaa/
OPNCNT	aaa/
OPRPTS	aaa/
OPOOS	aaa/
OPNDLGB	aaa/

EXAMPLE OF FORM 1

EPSCS and E911 PDSP
OFFICE PARAMETER DATA RECORD
NO. 1 ESS

DATE _____

ESS UNIT _____

PDSP UNIT _____

ITEM	PARAMETER NAME	ENTRY (EXAMPLES)	REMARKS
01	OPPDSP	201	
02	OPNEPS	2	
03	OPNUDLC	1	
04	OPNTLN	3	
05	OPNTNN	2000	
06	OPNMDR	50	
07	OPNDLB	90	
08	OPCSAACI	5	
09	OPCSACCT	1	
10	OPHTFCT	16	
11	OPMATH	450	
12	OPNRPT	10	
13	OPNSCHD	8	
14	OPNCNT	200	
15	OPRPTS	10*	
16	OPOOS	10	
17	OPNDLGB	90	

* Maximum value of 12.

STEP

PROCEDURE

xxx n!

n = Office parameter value

xxx = Office parameter names—see Table A.

- 5 Rebuild TABDIR in scratch buffer in on-line memory by entering:

DIST:TABDIR!

- 6 At the system status panel (SSP), operate the LOCK key to lock the on-line central processor unit (CPU) on line (see Fig. 5).

- 7 Place off-line central control (CC) out-of-service state (split memory) by entering:

RMV:CU!

Note: When the off-line control unit (CU) is removed from service; updating of the off-line memory is disabled. This inhibits updating of the off-line CU when the LOCK key is released.

- 8 Clear all off-line data base memory (including newly allocated space) copy over OPT, TAB DIR and rebuild rest of data per new definitions and build off-line memory block by block by entering:

DIST:DB!

Note: The off-line CU must **not** be in the manual mode during this step.

- 9 At the SSP, release the LOCK key.

- 10 At CC control panel (Fig. 6), place both processor into MANUAL state by depressing the MANUAL key.

- 11 Initialize all tasks and update original off-line memory to that off the off-line memory by entering:

SW:INIT:STABLE!

(This will cause the system to reinitialize.)

- 12 Release both MANUAL keys.

- 13 Perform data base checks using OP:PDTABL messages (see BSP 231-144-350) and let system soak.

- 14 Copy data base from memory onto both cartridges by entering:

UPD:DBFILE!

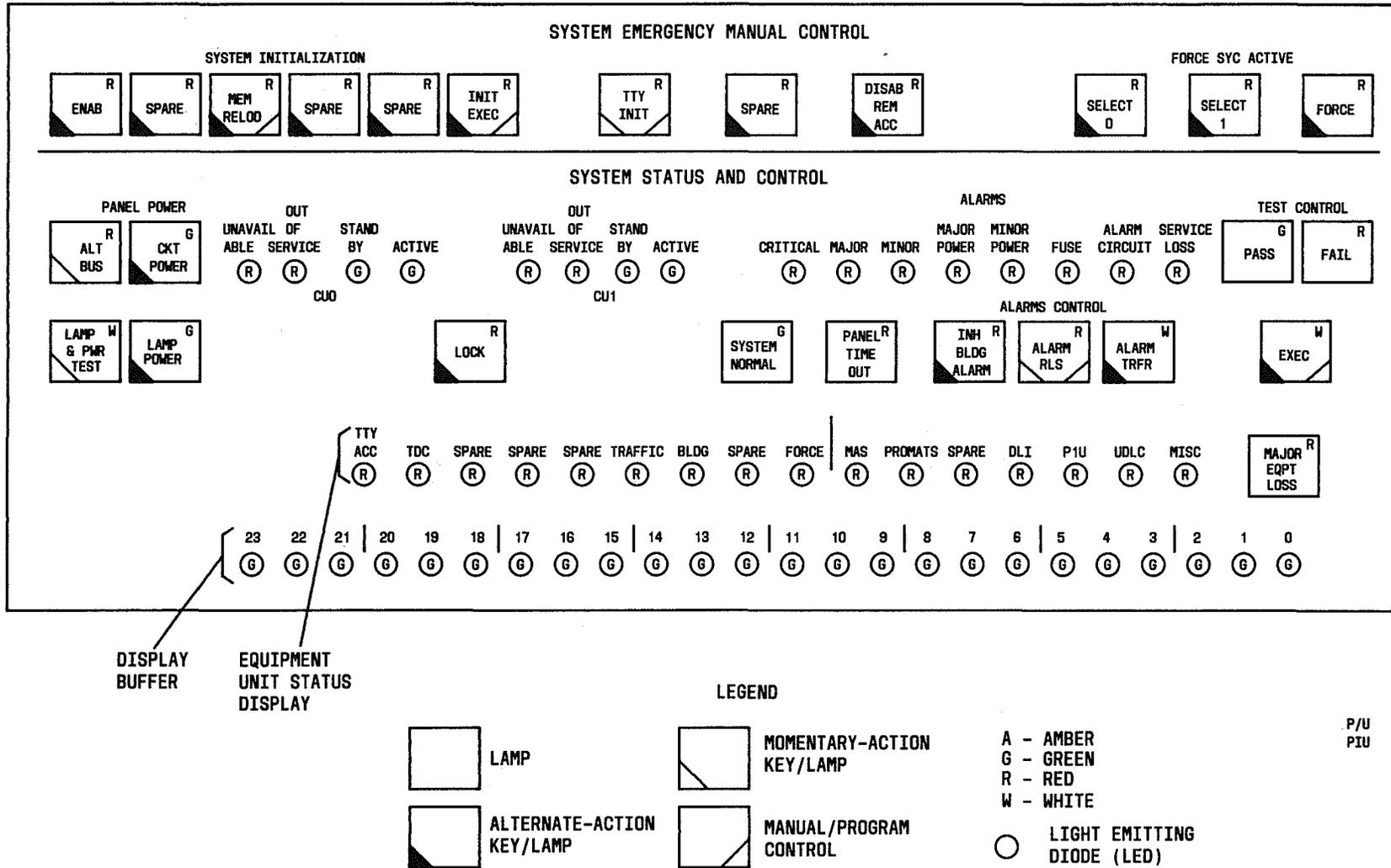


Fig. 5—System Status Panel Keys, Lamps, and LEDs

STEP	PROCEDURE
15	Inhibit DIST command by entering: INH:DIST!
16	Recent change messages can be entered at this time.
4. COMPLEX REALLOCATION	
4.01	The complex reallocation procedure must be performed during hours of light traffic and low office activity; both processors and associated equipment must be operational. It should also be noted that the data base formats may be changed.
4.02	This reallocation procedure (see Fig. 7) is divided into seven parts:
(a)	Compare the data base in memory with data base on tape.
(b)	Copy two tapes (this operation makes two backup copies of the tape).
(c)	Place transition copy of tape in both tape data cartridges (TDCs) and build new data base in off-line store.
(d)	Place a cartridge with the new generic into each TDC.
(e)	Load the new data base onto tape.
(f)	Load the new generic and data base into both memory stores from tape.
(g)	Make copies of newly reallocated tapes.
4.03	The complete procedure for complex reallocation is given in the steps that follow. For a concise procedure, refer to Fig. 7.

STEP	PROCEDURE
1	At the maintenance terminal, enter the following to prepare for reallocation as well as inhibit other terminals from inputting recent changes: ALW:DIST!
2	Compare the data base in main store with data base on the tape by entering the following at the maintenance terminal: CMPR:DB;DBFILE:ERROR n! <i>Note:</i> The n is the number of errors in a range from 1 to 10 that can occur before the comparison will end. If error is found, use local record to determine the correct data entries; then rectify, using the same RC and verification procedure at the maintenance terminal.
3	Copy two additional tapes in order to have current backup tapes in the storage plan by removing two of the oldest tapes from the backup storage area. Remove the labels from the tape cartridges and relabel, indicating the generic number and the date of the update. See the procedures for making extra copies of cartridges (Part 5).

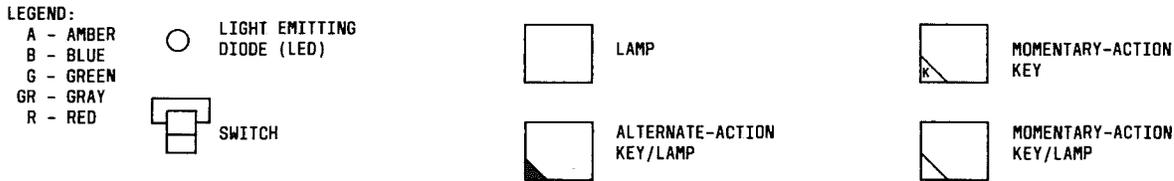
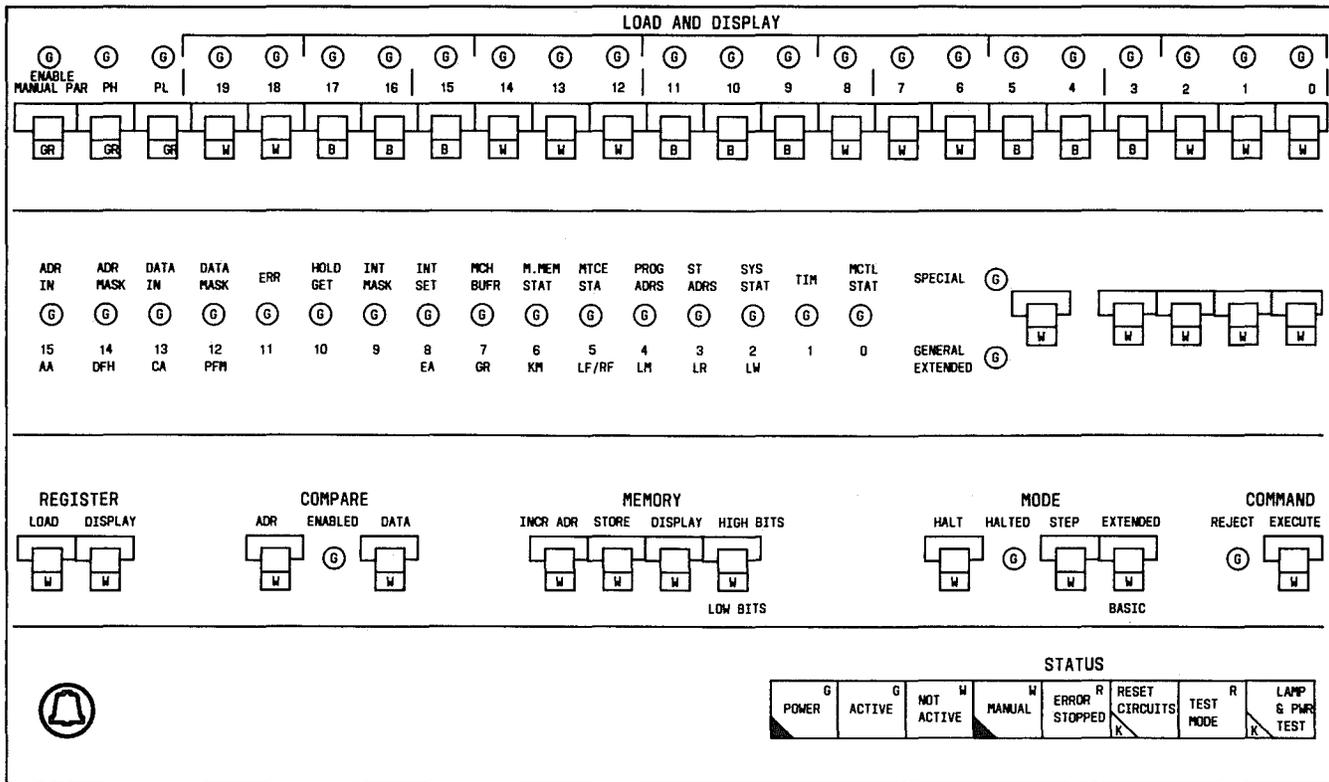


Fig. 6—CC Control Panel

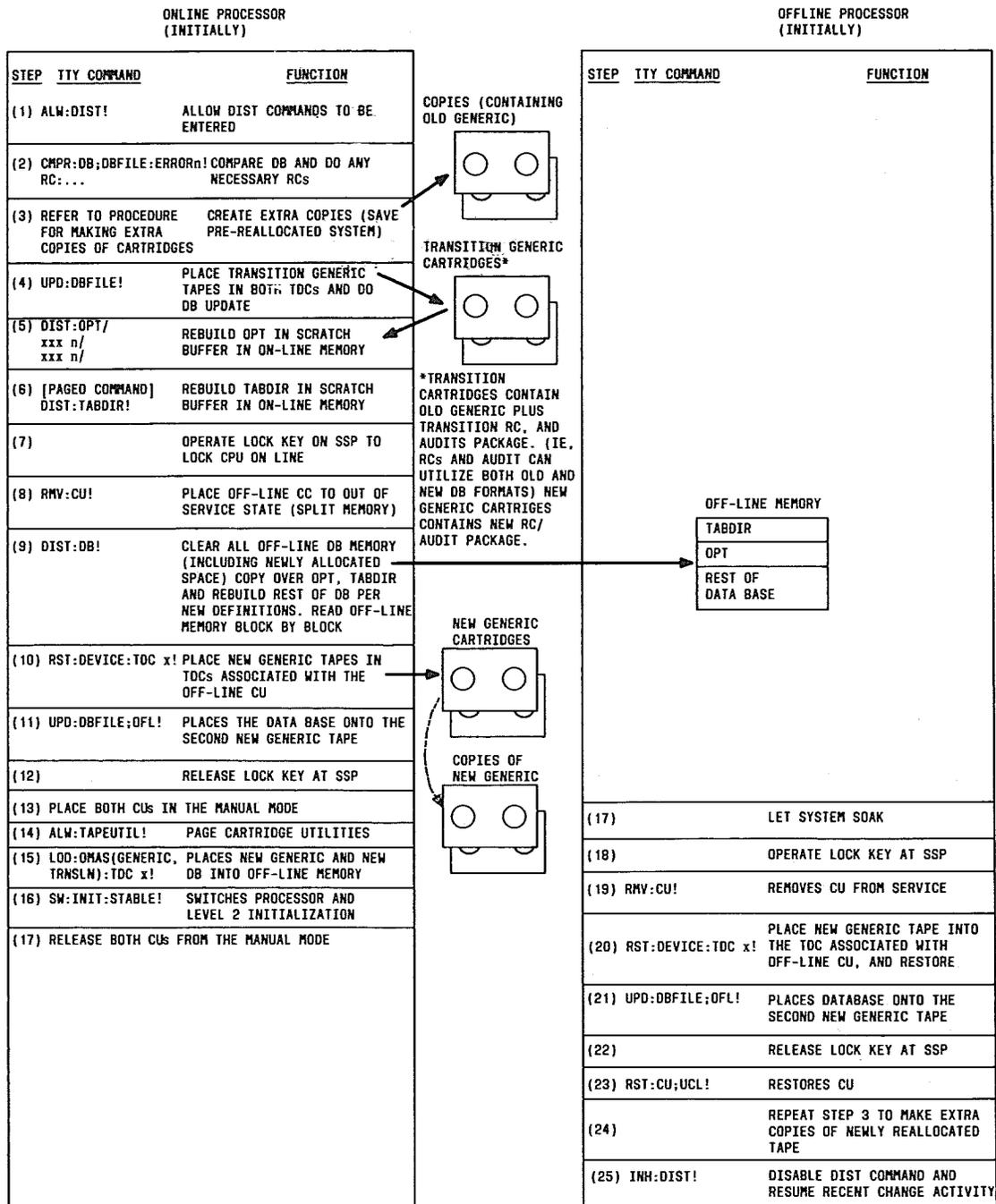


Fig. 7—Complex Reallocation

STEP

PROCEDURE

-
- 4 Place transition generic tape in both TDCs and perform a data base update by entering:
UPD:DBFILE!
- 5 Rebuild OPT in scratch buffer in on-line memory by entering:
DIST:OPT/
xxx n/
. . .
xxx n!
n = Office parameter value
xxx = Office parameter name (see Table A)
- 6 Rebuild TABDIR in scratch buffer in on-line memory by entering:
DIST:TABDIR!
- 7 At the system status panel (SSP), operate the LOCK key to lock the on-line CPU on line (see Fig. 5).
- 8 Place off-line CC out-of-service state (split memory) by entering:
RMV:CU!
- 9 Clear all off-line data base memory (including newly allocated space), copy over OPT, TABDIR, and rebuild rest of data per new definitions and build off-line memory, block by block, by entering:
DIST:DB!
Note: Both CUs must *not* be in the manual mode during this step.
- 10 Place new generic cartridge into the TDC associated with the off-line CU and restore that TDC by entering:
RST:DEVICE:TDC x!
x = The TDC associated with the off-line CU (This is just to make sure the tape is available).
- 11 Place the data base onto the second new generic tape by entering:
UPD:DBFILE;OFL!

STEP	PROCEDURE
12	At the SSP, release the LOCK key.
13	Place both CUs in the MANUAL mode.
14	Page in the cartridge utility by entering: ALW:TAPEUTIL!
15	Place new generic and new data base into off-line memory by entering: LOD:OMAS(GENERIC,TRNSLN):TDC x! X is the TDC associated with the office CU.
16	Switch processors and perform level 2 initialization by entering: SW:INIT:STABLE!
	Note: Both CUs should be in the MANUAL mode during this step.
17	Release both CUs from the MANUAL mode.
18	Let system soak.
19	At the SSP, depress the LOCK key.
20	Remove the CU from service by entering: RMV:CU!
21	Place new generic cartridge into the TDC associated with the off-line CU and restore that TDC by entering: RST:DEVICE:TDC x!
	x = The TDC associated with the off-line CU. (This is just to make sure the tape is available.)
22	Place the data base onto the second new generic tape by entering: UPD:DBFILE;OFL!
23	At SSP, release LOCK key.
24	Restore the CU by entering: RST:CU;UCL!
25	Make extra copies of newly reallocated tape by repeating Step 3.

STEP	PROCEDURE
26	Disable DIST command and resume recent change activity by entering: INH:DIST!

5. PROCEDURE FOR MAKING EXTRA TAPE CARTRIDGES

5.01 The procedure for making extra copies of cartridges is as follows:

STEP	PROCEDURE
1	At the SSP, operate LOCK key to lock on-line CPU on line (see Fig. 5).
2	Place off-line CC in out-of-service state (split memory) by entering: RMV:CU!
	Note: Where the off-line CU is removed from service, updating of the off-line memory is disabled. This inhibits updating of the off-line CU when the lock key is released.
3	Remove cartridge from the TDC associated with the off-line CU and insert the copy cartridge.
4	Page in the copy utility by entering: ALW:TAPEUTIL!
5	Copy the translation file from one cartridge to the other by entering: COPY:FILE(x, y),ADD O:TRNSLN! x = The TDC associated with the on-line CU. y = The TDC associated with the off-line CU.
6	Confirm the to and from TDC. This must be done before the copy will take place. This is accomplished by entering: CONFIRM:COPY!
7	Copy the checksum file onto the other cartridge by entering: COPY:FILE(x, y),ADD O:CHECKSUM!

STEP	PROCEDURE
8	Confirm the to and from TDC copy by entering: CONFIRM:COPY!
9	If there have been any recent patches made, the patches file should be copied into the cartridge; if not, proceed to Step 10. If recent patches have been made, enter: COPY:FILE(x, y),ADD O:PATCH!
10	Confirm that the to and from TDCs are correct by entering: CONFIRM:COPY!
11	Stop tape utilities by entering: STOP:TAPEUTIL
12	At the SSP, release the LOCK key.
13	Restore the off-line CU to service by entering: RST:CU;UCL!
14	If there have been any patches made to the nonresident generic, this step must be repeated for each patch. (After Steps 1-13 have been completed for both backup cartridge and both backup cartridges are available in the TDCs). <ul style="list-style-type: none"><li data-bbox="423 1205 948 1356">● Enter: ALW:OW! IN:OW X;TAPE! x = overwrite number<li data-bbox="423 1394 688 1415">● Operate LOCK key.<li data-bbox="423 1457 639 1545">● Enter: LOD:OW:NEW!<li data-bbox="423 1583 688 1604">● Release LOCK key. <li data-bbox="423 1688 542 1797">● Enter: SW:CU!<li data-bbox="423 1877 688 1898">● Operate LOCK key.

STEP	PROCEDURE
	<ul style="list-style-type: none">• Enter: LOD:OW:NEW!• Release LOCK key.• Enter: STOP:OW!
