

```
UUU      UUU  EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  P P P P P P P P P P
UUU      UUU  EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  P P P P P P P P P P
UUU      UUU  EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  P P P P P P P P P P
UUU      UUU  EEE      TTT      P P P      P P P
UUU      UUU  EEE      TTT      P P P      P P P
UUU      UUU  EEE      TTT      P P P      P P P
UUU      UUU  EEE      TTT      P P P      P P P
UUU      UUU  EEE      TTT      P P P      P P P
UUU      UUU  EEE      TTT      P P P      P P P
UUU      UUU  EEE      TTT      P P P      P P P
UUU      UUU  EEEEEEEEEEEEEEE  TTT      P P P P P P P P P P
UUU      UUU  EEEEEEEEEEEEEEE  TTT      P P P P P P P P P P
UUU      UUU  EEEEEEEEEEEEEEE  TTT      P P P P P P P P P P
UUU      UUU  EEE      TTT      P P P
UUU      UUU  EEE      TTT      P P P
UUU      UUU  EEE      TTT      P P P
UUU      UUU  EEE      TTT      P P P
UUU      UUU  EEE      TTT      P P P
UUU      UUU  EEE      TTT      P P P
UUU      UUU  EEE      TTT      P P P
UUUUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE  TTT      P P P
UUUUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE  TTT      P P P
UUUUUUUUUUUUUUUUUU  EEEEEEEEEEEEEEE  TTT      P P P
```

```
RRRRRRRR      MM      MM      SSSSSSSS  TTTTTTTTTT  EEEEEEEEEEE  SSSSSSSS  TTTTTTTTTT  666666
RRRRRRRR      MM      MM      SSSSSSSS  TTTTTTTTTT  EEEEEEEEEEE  SSSSSSSS  TTTTTTTTTT  666666
RR      RR      MMMM  MMMM  SS      TT      EE      SS      TT      66
RR      RR      MMMM  MMMM  SS      TT      EE      SS      TT      66
RR      RR      MM      MM      SS      TT      EE      SS      TT      66
RR      RR      MM      MM      SS      TT      EE      SS      TT      66
RRRRRRRR      MM      MM      SSSSSS      TT      EEEEEEEE  SSSSSS      TT      66666666
RRRRRRRR      MM      MM      SSSSSS      TT      EEEEEEEE  SSSSSS      TT      66666666
RR      RR      MM      MM      SS      TT      EE      SS      TT      66      66
RR      RR      MM      MM      SS      TT      EE      SS      TT      66      66
RR      RR      MM      MM      SS      TT      EE      SS      TT      66      66
RR      RR      MM      MM      SSSSSSSS  TT      EEEEEEEEEEE  SSSSSSSS  TT      666666
RR      RR      MM      MM      SSSSSSSS  TT      EEEEEEEEEEE  SSSSSSSS  TT      666666
                                         ....
                                         ....
                                         ....
                                         ....
```

```
LL      IIIIII  SSSSSSSS
LL      IIIIII  SSSSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SSSSSS
LL      II      SSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LLLLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLLLL  IIIIII  SSSSSSSS
```



```
0000 71      $BEGIN RMSTEST6,007,__,RMSTEST,<TEST MAGTAPE>,<GBL, LONG>
0000 72
0000 73
0000 74      .ENABL  DBG
0000 75
0000 76
0000 77      $DEVDEF
0000 78      .NLIST  MEB
0000 79
0000 80      :
0000 81      : macros:
0000 82      :
0000 83
0000 84      .MACRO  BUFF NAM,SIZE
0000 85 NAM'BUF:  :
0000 86      .BLKB   SIZE
0000 87      NAM'BSZ==SIZE
0000 88      .ENDM   BUFF
0000 89
0000 90
0000 91      .MACRO  TYPE STRING, ?L
0000 92      STORE  <STRING>
0000 93      BLBC   VERBOSITY,L
0000 94      MOVL   $$$TMPX,CMDORAB+RAB$R RBF
0000 95      MOVW   $$$TMPX1,CMDORAB+RAB$R RSZ
0000 96      $PUT   RAB=CMDORAB,ERR=REPORT_ERROR
0000 97      BSBW   ERR
0000 98 L:
0000 99      .ENDM   TYPE
0000 100
0000 101
0000 102      .MACRO  WTTYPE STRING
0000 103      $WAIT   RAB=CMDORAB
0000 104      TYPE   <STRING>
0000 105      .ENDM   WTTYPE
0000 106
0000 107
0000 108      .MACRO  STORE STRING,PRE
0000 109      .SAVE
0000 110      .PSECT  __SRMSNAM
0000 111      $$$TMPX=.-
0000 112      PRE
0000 113      .ASCII  %STRING%
0000 114      $$$TMPX1=.-$$$TMPX
0000 115      .RESTORE
0000 116      .ENDM   STORE
```

; store any carriage control info

0000	118	
0000	119	
0000	120	
0000	121	.MACRO BEGIN TSTNAM
0000	122	STORE <TSTNAM>
0000	123	MOVL \$\$\$TMPX,BEG_DESCR+4 ; addr
0000	124	MOVL \$\$\$TMPX1,BEG_DESCR ; len
0000	125	BSBW BEGPUT
0000	126	.ENDM BEGIN
0000	127	.MACRO FINISH TSTNAM
0000	128	STORE <TSTNAM>
0000	129	MOVL \$\$\$TMPX,FIN_DESCR+4 ; addr
0000	130	MOVL \$\$\$TMPX1,FIN_DESCR ; len
0000	131	BSBW FINPUT
0000	132	.ENDM FINISH
0000	133	.MACRO FIELD FLDNAM
0000	134	STORE <FLDNAM>
0000	135	MOVL \$\$\$TMPX,FLD_DESCR+4 ; addr
0000	136	MOVL \$\$\$TMPX1,FLD_DESCR ; len
0000	137	BSBW FLDPUT
0000	138	.ENDM FIELD
0000	139	.MACRO MBPT, ?L
0000	140	BLBC VERBOSITY,L
0000	141	BPT
0000	142	L:
0000	143	.ENDM MBPT
0000	144	


```
00000000 146 .PSECT RMSTEST,GBL, LONG
0000 147 .ALIGN LONG
0000 148 T6START:
0000 149 MTAFAB: $FAB DNM=<TST$MTA:.FIL:1>,fns=fnsiz
0050 150 MTARAB: $RAB RHB=RHBUFF,UBF=IOBUF,FAB=MTAFAB
0094 151 BUFF IO,512.
00000000 0294 152 BUF: .LONG 0 ; key for random lookup
0298 153
0298 154 ;
0298 155 ; file names for various files
0298 156 ;
0298 157
0298 158 MTVAR_FNM:
52 41 56 54 4D 0298 159 .ASCII \MTVAR\
00000005 029D 160 FNSIZE=-MTVAR_FNM
029D 161 MTFIX_FNM:
58 49 46 54 4D 029D 162 .ASCII \MTFIX\
02A2 163 MTVFC_FNM:
43 46 56 54 4D 02A2 164 .ASCII \MTVFC\
02A7 165 MTST1_FNM:
31 54 53 54 4D 02A7 166 .ASCII \MTST1\
02AC 167 NONFIL_FNM:
58 49 46 46 4E 02AC 168 .ASCII \NFFIX\
```

```
02B1 170
02B1 171 :
02B1 172 :
02B1 173 : this is a test program to test out the use of magtapes through rms-32
02B1 174 : it exercises the basic functionality
02B1 175 :
02B1 176 :
02B1 177 TST$MTA::
OFFC 02B1 178 .WORD ^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11>
02B3 179
02B3 180 :
02B3 181 : create 3 files on the tape - with different record formats, and fill them
02B3 182 :
02B3 183 :
02B3 184 BEGIN <MAGTAPE TESTS>
02C8 185
02C8 186 :
02C8 187 : the 1st file -- rfm=fix
02C8 188 :
02C8 189
59 FD84 CF DE 02C8 190 MOVAL MTARAB,R9
02CD 191 $FAB_STORE FAB=MTAFAB,RFM=FIX,MRS=#50,FNA=MTFIX_FNM,-
02CD 192 FOP=<RWO,SUP>,RAT=<CR,BLK>,FAC=PUT
02EF 193 $RAB_STORE RAB=R9,RSZ=#50,RBF=IOBUF
02F9 194
02F9 195 :
02F9 196 : create a file and close it in order to discover if the device is mounted foreign
02F9 197 :
02F9 198
02F9 199 $CREATE FAB=MTAFAB,ERR=REPORT_ERROR
FCF3' 30 030A 200 BSBW ERR
07B2 30 030D 201 BSBW CLOSE MT
04 FD2B CF 18 E0 0310 202 BBS #DEV$V_FOR,FAB$$_DEV+MTAFAB,5$
0005 30 0316 203 BSBW STRMT
051E 04 0319 204 RET
30 031A 205 5$: BSBW NON_FILE
04 031D 206 RET
031E 207 STRMT:
031E 208 TYPE <CREATE 3 TEST FILES ON TAPE>
56 32 D0 034D 209 MOVL #50,R6 ; alternate record size
0758 30 0350 210 BSBW DO_PUT
0353 211
0353 212 :
0353 213 : now the 2nd file w/ rfm = var
0353 214 :
0353 215 :
0353 216 $FAB_STORE FAB=MTAFAB,FNA=MTVAR_FNM,RFM=VAR,MRS=#0,BLS=#512,-
0353 217 FOP=<ZPOS,SUP>
04 40 A0 05 E1 0373 218 BBC #DEV$V_SQD,FAB$$_DEV(R0),10$; branch if not magtape
1E A0 08 8A 0378 219 BICB2 #FAB$$_BLK,FAB$$_RAT(R0); verify blk defaulting
037C 220 10$: $RAB_STORE RAB=R9,RSZ=#79 ; primary length
56 3B 9A 0382 221 MOVZBL #59,R6 ; alternate size
0723 30 0385 222 BSBW DO_PUT
0388 223
0388 224 :
0388 225 : now the 3rd file w/ rfm = vfc
0388 226 :
```


RMSTEST6
V04-000

TEST MAGTAPE ;

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			0388	227
			0388	228
			0388	229
			03A9	230
56	37	D0	03AF	231
	06F6	30	03B2	232

\$FAB_STORE FAB=MTAFAB,FNA=MTVFC_FNM,RFM=VFC,BLS=#1024,-
FOP=<POS,RWC,SUP>,FSZ=#4
\$RAB_STORE RAB=R9,RSZ=#75 ; primary size
MOVL #55,R6 ; alternate size
BSBW DO_PUT

```
03B5 234
03B5 235 :++
03B5 236 :
03B5 237 : reread 3 created files and verify their contents
03B5 238 :
03B5 239 :--
03B5 240
03B5 241 TYPE <RE-READ FILES CREATED IN STEP 1>
03E4 242 $RAB_STORE RAB=R9,ROP=<LOC>
03EC 243 $FAB_STORE FAB=MTAFAB,FNA=MTFIX_FNM,FOP=#0,-
03EC 244 RAT=#0,ORG=REL,FAC=<GET,BRO>
0406 245 BSBW OPEN MT
01 FC12 CF 91 0409 246 CMPB MTAFAF+FAB$B_RFM,#FAB$C_FIX; is it fixed rfm?
15 13 040E 247 BEQL RMT1
0410 248 FIELD <RFM (NOT = FIXED)>
1E FC16 CF 05 E1 0425 249 RMT1: BBC #DEV$V SQD,FAB$B_DEV+MTAFAB,RMT2; skip test if disk
0800 8F FC0D CF B1 042B 250 CMPW MTAFAF+FAB$B_BLS,#2048 ; is block size right?
15 13 0432 251 BEQL RMT2
0434 252 FIELD <BLS>
32 FBE9 CF B1 0449 253 RMT2: CMPW MTAFAF+FAB$B_MRS,#50 ; is record size right?
15 13 044E 254 BEQL RMT3
0450 255 FIELD <MRS>
0738 30 0465 256 RMT3: BSBW READ MT ; read and verify records
32 32 0468 257 .BYTE 50,50
081A 30 046A 258 BSBW EOF_CLOSE ; check eof and close
046D 259
046D 260 :
046D 261 : 2nd file
046D 262 :
046D 263 :
046D 264 $FAB_STORE FAB=MTAFAB,FNA=MTVAR_FNM,RAT=#0,ORG=REL
02 FB99 CF 91 047F 265 BSBW OPEN MT
15 13 0482 266 CMPB MTAFAF+FAB$B_RFM,#FAB$C_VAR
0487 267 BEQL RMT4
0489 268 FIELD <RFM (NOT = VAR)>
0200 8F FB9A CF B1 049E 269 RMT4: CMPW MTAFAF+FAB$B_BLS,#512 ; is block size correct?
15 13 04A5 270 BEQL RMT5
04A7 271 FIELD <BLS>
FB76 CF B5 04BC 272 RMT5: TSTW MTAFAF+FAB$B_MRS ; is max record size right?
15 13 04C0 273 BEQL RMT6
04C2 274 FIELD <MRS>
06C1 30 04D7 275 RMT6: BSBW READ MT VAR ; read & verify records
07AA 30 04DA 276 BSBW EOF_CLOSE
04DD 277
04DD 278 :
04DD 279 : 3rd file
04DD 280 :
04DD 281 :
04DD 282 $FAB_STORE FAB=MTAFAB,FNA=MTVFC_FNM,RAT=#0,ORG=REL
03 FB29 CF 91 04EF 283 BSBW OPEN MT
15 13 04F2 284 CMPB FAB$B_RFM+MTAFAB,#FAB$C_VFC; right record format?
04F7 285 BEQL RMT7
04F9 286 FIELD <RFM (NOT = VFC)>
1E FB2D CF 05 E1 050E 287 RMT7: BBC #DEV$V SQD,FAB$B_DEV+MTAFAB,RMT8; skip test if disk
0400 8F FB24 CF B1 0514 288 CMPW MTAFAF+FAB$B_BLS,#1024 ; right block size?
15 13 051B 289 BEQL RMT8
051D 290 FIELD <BLS>
```


RMSTEST6
V04-000

TEST MAGTAPE ;

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FB00	CF	B5	0532	291	RMT8:	TSTW	MTAFAB+FAB\$W_MRS	
	15	13	0536	292		BEQL	RMT9	
			0538	293		FIELD	<MRS>	
0650		30	0540	294	RMT9:	BSBW	READ MT	
	37	48	0550	295		.BYTE	75,55	
0732		30	0552	296		BSBW	EOF_CLOSE	

; mrs ok?


```
0555 298
0555 299 :++
0555 300 :
0555 301 re-open mtvar.fil and test spacing and rewind
0555 302 :
0555 303 :--
0555 304 :
0555 305
0584 306 TYPE <PERFORM SPACING AND REWIND TESTS>
058F 307 $FAB_STORE FAB=MTAFAB,FNA=MTVAR_FNM
0592 308 BSBW OPEN_MT
0596 309 $RAB_STORE RAB=R9,BKT=#16 ; space count
059F 310 $SPACE R9
06F3 311 BSBW CHKEOF1 ; verify at eof
05A2 312 $RAB_STORE R9,BKT=#16
05A6 313 $SPACE R9 ; space forward at eof
05AF 314 BSBW CHKEOF1 ; verify still at eof
05B2 315 $RAB_STORE R9,BKT=#-16 ; backspace count
05BA 316 $SPACE R9
06DF 30 05C3 317 BSBW CHKBOF ; verify at start of file
05C6 318 $RAB_STORE R9,BKT=#8
05CA 319 $SPACE RAB=R9,ERR=REPORT_ERROR
FA24' 30 05D9 320 BSBW ERR
05DC 321 $RAB_STORE R9,BKT=#0 ; count = 0
05DF 322 $SPACE RAB=R9,ERR=REPORT_ERROR
FA0F' 30 05EE 323 BSBW ERR
05F1 324 $RAB_STORE R9,BKT=#-4
05F9 325 $SPACE RAB=R9,ERR=REPORT_ERROR
F9F5' 30 0608 326 BSBW ERR
060B 327 :
060B 328 : read records from block 4 thru end of file, verifying goodness
060B 329 :
060B 330 :
57 39 9A 060B 331 MOVZBL #^A/!/ +24,R7 ; starting rec #
0592 30 060E 332 BSBW LOOP1 ; verify records
3B 4F 0611 333 .BYTE 79,59
0613 334 $RAB_STORE R9,BKT=#-100
061B 335 $SPACE R9
067E 30 0624 336 BSBW CHKBOF ; verify at start
0571 30 0627 337 BSBW READ_MT_VAR
062A 338 $REWIND RAB=R9,ERR=REPORT_ERROR
F9C4' 30 0639 339 BSBW ERR
055C 30 063C 340 BSBW READ_MT_VAR
0645 30 063F 341 BSBW EOF_CLOSE
```



```
00000000'8F 0475 30 0642 343
F96C CF D1 0642 344 :++
18 13 0642 345 : test of "create if" and $nxtvol
0642 346 :
0642 347 :
0642 348 :--
0642 349 :
0642 350 TYPE <PERFORM "CREATE IF", $TRUNCATE AND $NXTVOL TESTS>
0671 351 $FAB_STORE FAB=MTAFAB,FAC=PUT,FNA=MTST1_FNM,-
0671 352 FOP=CIF,RFM=VAR
068C 353 $ERASE FAB=RO ; erase in case disk file
0695 354 BSBW CREATE_MT
0698 355 CMPL MTAFAB,FAB$L_STS,#RMSS_CREATED
06A1 356 BEQL RMT11
06A3 357 FIELD <STS (EXPECTED 'RMSS_CREATED')>
06B8 358 BSBW ERR
06BB 359 RMT11: $RAB_STORE RAB=R9,RBF=IOBUF,RSZ=#50
06C5 360 BISB2 #RAB$L_TPT,RAB$L_ROP(R9); allow put not at eof
06C9 361 $PUT RAB=R9,ERR=REPORT_ERROR
06D8 362 BSBW ERR
06DB 363 BSBW CLOSE_MT
06DE 364 :
06DE 365 : now re-open file just created above and overwrite record
06DE 366 :
06DE 367 :
06DE 368 :
06DE 369 $FAB_STORE FAB=MTAFAB,FAC=<GET,PUT,TRN>,FOP=<CIF,NEF>
06EF 370 BSBW CREATE_MT
06F2 371 CMPL MTAFAB,FAB$L_STS,#RMSS_NORMAL
06FB 372 BEQL RMT12
06FD 373 FIELD <STS (EXPECTED 'NORMAL')>
0712 374 BSBW ERR
0715 375 RMT12: $RAB_STORE RAB=R9,RBF=IOBUF,RSZ=#79
0721 376 MOVL #59,R6 ; alternate rec size
0724 377 BSBW PUTRECS
0727 378 :
0727 379 :
0727 380 : test truncate
0727 381 :
0727 382 :
0727 383 BSBW PUTRECS ; write 2nd half of file
072A 384 $REWIND RAB=R9,ERR=REPORT_ERROR
0739 385 BSBW ERR
073C 386 BSBW READ_MT_VAR ; read 1st half of file
073F 387 $GET RAB=R9,ERR=REPORT_ERROR ; need to advance the current
074E 388 BSBW ERR ; record pointer before truncate
0751 389 $TRUNCATE RAB=R9,ERR=REPORT_ERROR
0760 390 BSBW ERR ; truncate 2nd half of file
0763 391 BSBW CHKEOF ; check for eof
0766 392 $RAB_STORE RAB=R9,RBF=IOBUF,RSZ=#79
0772 393 MOVL #59,R6
0775 394 BSBW PUTRECS ; re-put 2nd half
0778 395 $REWIND RAB=R9,ERR=REPORT_ERROR
0787 396 BSBW ERR
078A 397 BSBW READ_MT_VAR ; read 1st half
078D 398 BSBW READ_MT_VAR ; read 2nd half, verifying
0790 399 BSBW CHKEOF ; check for eof again
```

			0793	400		\$REWIND	RAB=R9,ERR=REPORT_ERROR	
	F85B'	30	07A2	401		BSBW	ERR	
	03F3	30	07A5	402		BSBW	READ_MT_VAR	; read 1st half
			07A8	403		\$GET	RAB=R9,ERR=REPORT_ERROR	; need to advance the current
	F846'	30	07B7	404		BSBW	ERR	; record pointer before truncate
			07BA	405		\$TRUNCATE	RAB=R9,ERR=REPORT_ERROR	; trunc 2nd half
	F834'	30	07C9	406		BSBW	ERR	; leave file as before
19 F86F CF	05	E1	07CC	407		BBC	#DEV\$V,SQD,FAB\$DEV+MTAFAB,20\$	; branch if not really mt
12 00000000	'EF	E9	07D2	408		BLBC	VERBOSITY,20\$	; branch if not interactive
			07D9	409		\$NXTVOL	RAB=R9,ERR=REPORT_ERROR	
	F815'	30	07E8	410		BSBW	ERR	
			07EB	411	20\$:	\$RAB_STORE	RAB=R9,RBF=IOBUF,RSZ=#79	
56	3B	D0	07F7	412		MOVL	#59,R6	
	02DA	30	07FA	413		BSBW	PUTRECS	
			07FD	414		\$REWIND	RAB=R9,ERR=REPORT_ERROR	
	F7F1'	30	080C	415		BSBW	ERR	
	0389	30	080F	416		BSBW	READ_MT_VAR	; read recs from rel vol 1
	0386	30	0812	417		BSBW	READ_MT_VAR	; read recs form rel vol 2
			0815	418		\$FAB_STORE	FAB=MTAFAB,FOP=<RWC>;	cause volume set rewind
	0462	30	0822	419		BSBW	EOF_CLOSE	
			0825	420		FINISH	<MAGTAPE TESTS>	
			083A	421				
		05	083A	422		RSB		


```
083B 424
083B 425 :++
083B 426 : non-file structured tests
083B 427 :--
083B 428
083B 429
083B 430 : first write out a fix length 512 byte record file
083B 431 : note: set tst$mta to disk if non_file structured disk test wanted.
083B 432 : mount/fo dev /rec=512/blo=512
083B 433 :
083B 434
083B 435 NON_FILE:
083B 436 TYPE <NON_FILE STRUCTURE CREATE TEST>
086A 437 MOVAL MTARAB,R9
086F 438 $FAB_STORE FAB=MTAFAB,RFM=FIX,MRS=#512,FNA=NONFIL_FNM,-
086F 439 RAT=#0,FAC=PUT,BLS=#512
0891 440 $RAB_STORE RAB=R9,RSZ=#512,RBF=IOBUF
089D 441 MOVL #512,R6
08A4 442 BSBW DO_PUT
08A7 443
08A7 444 :
08A7 445 : now open file and check attributes
08A7 446 :
08A7 447
08A7 448 $RAB_STORE RAB=R9,ROP=<LOC>
08AF 449 $FAB_STORE FAB=MTAFAB,FNA=NONFIL_FNM,FOP=#0,RAT=#0,-
08AF 450 FAC=ZGET,BRO>
0270 30 08C5 451 BSBW OPEN MT
08C8 452 $REWIND RAB=R9,ERR=REPORT_ERROR
08D7 453 BSBW ERR
08DA 454 BSBW CLOSE MT
08DD 455 MOVL #MTAFAB,R0
08E4 456 BSBW OPEN MT
08E7 457 CMPB MTAFAB+FAB$B_RFM,#FAB$C_FIX
08EC 458 BEQL NF10
08EE 459 FIELD <RFM(NOT FIXED)>
0903 460 NF10: BBC #DEV$V_SQD,FAB$B_DEV+MTAFAB,NF20
0909 461 CMPW MTAFAB+FAB$W_BLS,#512
0910 462 BEQL NF20
0912 463 FIELD <BLS>
0927 464 NF20: CMPW MTAFAB+FAB$W_MRS,#512
092E 465 BEQL NF30
0930 466 FIELD <MRS>
0945 467 NF30: BBS #DEV$V_SQD,FAB$B_DEV+MTAFAB,NF35
094B 468 BRW NF40
094E 469 NF35: TYPE <NON-FILE STRUCTURED MT TESTS>
097D 470 $RAB_STORE RAB=R9,BKT=#10
0981 471 $SPACE RAB=R9,ERR=REPORT_ERROR
0990 472 BSBW ERR
0993 473
0993 474 :
0993 475 : read records from block 11 thru end
0993 476 :
0993 477
0993 478 MOVZBL #^A/!/ + 10,R7
0996 479 BSBW LOOP1
0999 480 .BYTE 0,0
```

59 F7E2 CF DE 086A 437
56 00000200 8F D0 089D 441
0204 30 08A4 442
08A7 443
08A7 444
08A7 445
08A7 446
08A7 447
08A7 448
08AF 449
08AF 450
0270 30 08C5 451
F726' 30 08C8 452
01E5 30 08D7 453
50 00000000'8F D0 08DA 454
0251 30 08DD 455
01 F734 CF 91 08E4 456
15 13 08E7 457
08EC 458
08EE 459
1E F738 CF 05 E1 0903 460
0200 8F F72F CF B1 0909 461
15 13 0910 462
0912 463
0200 8F F70B CF B1 0927 464
15 13 092E 465
0930 466
03 F6F6 CF 05 E0 0945 467
0089 31 094B 468
094E 469
097D 470
0981 471
F66D' 30 0990 472
0993 473
0993 474
0993 475
0993 476
0993 477
57 2B 9A 0993 478
020A 30 0996 479
00 00 0999 480

```
57      F64B' 30 099B 481      $SRAB STORE      RAB=R9,BKT=#-10
      71 8F 9A 09A3 482      $SPACE      RAB=R9,ERR=REPORT_ERROR
      01E7 30 09B2 483      BSBW      ERR
      00 00 09B5 484      MOVZBL      #^X71,R7
      02C6 30 09B9 485      BSBW      LOOP1
      00 00 09BC 486      .BYTE      0,0
      30 09BE 487      BSBW      EOF CLOSE
      05 09C1 488      FINISH      <NON-FILE STRUCTURED MT TESTS>
      09D6 489      RSB
      09D7 490
      09D7 491      :
      09D7 492      : non-file structured random disk test
      09D7 493      :
      09D7 494
      09D7 495 NF40: TYPE      <NON_FILE STRUCTURED RANDOM DISK TEST>
      0A06 496
      0A06 497      :
      0A06 498      : now open for keyed access
      0A06 499      :
      0A06 500
      0A06 501      $SRAB STORE      RAB=R9,ROP=<LOC>,RAC=<KEY>,KBF=BUF
      0A18 502      MOVZBL      #1,BUF
      0A1D 503      BSBW      CHECK ONE
      0A20 504      MOVZBL      #89,BUF
      0A26 505      BSBW      CHECK ONE
      0A29 506      MOVZBL      #25,BUF
      0A2E 507
      0A2E 508 NF50: BSBW      CHECK ONE
      F3 0A31 509      AOBLEQ      #89,BUF,NF50
      00000059 8F 30 0A3B 510      BSBW      CLOSE MT
      0084 30 0A3E 511      FINISH      <NON-FILE STRUCTURE DISK TESTS>
      05 0A53 512      RSB
      0A54 513
      0A54 514      :
      0A54 515      : check one disk record
      0A54 516      :
      0A54 517
      0A54 518 CHECK_ONE:
      0A54 519      $GET      RAB=R9,ERR=REPORT_ERROR
      0A63 520      BSBW      ERR
      0A66 521      MOVZBL      #^A/!/,R0
      0A69 522      ADDL2      BUF,R0
      0A6E 523      CMPW      #512,RAB$W_RSZ(R9)
      0A74 524      BEQL      ONE10
      0A76 525      FIELD      <RSZ>
      0A8B 526 ONE10: CMPC5      RAB$W_RSZ(R9),@RAB$L_RBF(R9),R0,-
      0A93 527      #0,(SP)
      0A93 528      BEQL      ONE20
      0A95 529      FIELD      <RECORD>
      05 0AAA 530 ONE20: RSB
```



```
0AAB 532
0AAB 533 :++
0AAB 534 :
0AAB 535 : subroutines to do the nitty-gritties of the magtape tests
0AAB 536 :
0AAB 537 :--
0AAB 538 :
0AAB 539 : routine to create a magtape test file
0AAB 540 :
0AAB 541 : r9 points to the rab
0AAB 542 : rab$w_rsz(r9) contains the size of the records to be output
0AAB 543 : r6 is the alternate size of the records to be output
0AAB 544 : r7 will be destroyed
0AAB 545 : r0 has fab address
0AAB 546 :
0AAB 547 :--
0AAB 548 :
0AAB 549 DO_PUT:
005F 30 0AAB 550 BSBW CREATE_MT
27 10 0AAE 551 BSBB PUTRECS ; create the records
F53E' 30 0AB0 552 $DISCONNECT RAB=R9,ERR=REPORT_ERROR
0AC2 553 BSBW ERR
0AC2 554 CLOSE_MT:
F52A' 30 0AD3 555 $CLOSE FAB=MTAFAB,ERR=REPORT_ERROR
05 0AD6 556 BSBW ERR
0AD7 557 RSB
0AD7 558 :
0AD7 559 : subroutine to actually put the records in the file
0AD7 560 :
0AD7 561 :
0AD7 562 :
0AD7 563 PUTRECS:
57 21 D0 0AD7 564 MOVL #^A/!/,R7 ; starting character
F5B1 CF 22 A9 57 6E 00 2C 0ADA 565 LOOP: MOVCS #0,(SP),R7,RAB$W,RSZ(R9) ; loop to put records out
2C B9 57 D0 0AE3 566 MOVL R7,@RAB$L,RHB(R9) ; fill iobuf w/ characters
F507' 30 0AE7 567 $PUT RAB=R9,ERR=REPORT_ERROR ; fill in header
50 22 A9 56 50 B0 0AF6 568 BSBW ERR
22 A9 56 50 B0 0AF9 569 MOVW RAB$W,RSZ(R9),R0 ; swap rec lengths
CE 57 0000007B 8F D0 0AFD 571 MOVW R6,RAB$W,RSZ(R9)
05 0B0C 572 MOVL R0,R6
0B04 573 AOBLS #^X7B,R7,LOOP
RSB 574
```

```
0B0D 576
0B0D 577 :
0B0D 578 : routine to create a file
0B0D 579 :
0B0D 580
0B0D 581 CREATE_MT:
0B0D 582 $CREATE FAB=MTAFAB,ERR=REPORT_ERROR
F4DF' 30 0B1E 583 BSBW ERR
F4DF CF D4 0B21 584 CLRL FAB$L_FOP+MTAFAB
0B25 585 $CONNECT RAB=R9,ERR=REPORT_ERROR
F4C9' 30 0B34 586 BSBW ERR
05 0B37 587 RSB
0B38 588
0B38 589
0B38 590 :
0B38 591 : routine to open a mt file
0B38 592 :
0B38 593
0B38 594 OPEN_MT:
0B38 595 $OPEN FAB=R0,ERR=REPORT_ERROR
F4B6' 30 0B47 596 BSBW ERR
0B4A 597 $CONNECT RAB=R9,ERR=REPORT_ERROR
F4A4' 30 0B59 598 BSBW ERR
00 F4BD CF 91 0B5C 599 CMPB MTAFAB+FAB$B_ORG,#FAB$C_SEQ
15 13 0B61 600 BEQL OPN1
0B63 601 FIELD <ORG (NOT SEQUENTIAL)>
1C F4C3 CF 18 E0 0B78 602 OPN1: BBS #DEV$V_FOR,FAB$L_DEV+MTAFAB,OPN2; branch if foreign test
F49B CF 02 93 0B7E 603 BITB #FAB$M_CR,MTAFAB+FAB$B_RAT
15 12 0B83 604 BNEQ OPN2
0B85 605 FIELD <RAT (CR NOT SET)>
05 0B9A 606 OPN2: RSB
```



```
0B9B 608
0B9B 609 ;
0B9B 610 ; read and check magtape file
0B9B 611 ;
0B9B 612 ;
0B9B 613 READ_MT_VAR:
03 10 0B9B 614 BSBB READ_MT
3B 4F 0B9D 615 .BYTE 79,59
05 0B9F 616 RSB
0BA0 617
0BA0 618 READ_MT:
57 21 D0 0BA0 619 MOVL #^A/!/,R7 ; starting character
51 3C A9 D0 0BA3 620 LOOP1: MOVL RAB$L_FAB(R9),R1 ; Get the FAB address
1F A1 01 91 0BA7 621 CMPB #FAB$C_FIX,FAB$B_RFM(R1) ; See if file is fixed
57 0000005E 8F D1 0BAB 622 BNEQ 10$ ; If not then skip next test
02 12 0BAD 623 CMPL #^A/^/,R7 ; otherwise is the record of carret's
57 D6 0BB4 624 BNEQ 10$ ; Not carrets then continue
0BB6 625 INCL R7 ; Skip that record
0BB8 626
0BB8 627 10$:
0BC7 628 $GET RAB=R9,ERR=REPORT_ERROR
00000094'8F 28 A9 D1 0BCA 629 BSBW ERR
1D 12 0BD2 630 CMPL RAB$L_RBF(R9),#IOBUF
0BD4 631 BNEQ LP1 ; branch if locate mode worked
0BE9 632 FIELD <RBF (INDICATES MOVE MODE)>
0BF1 633 MBPT
50 00 BE 9A 0BF1 634 LP1: MOVZBL @ (SP),R0 ; get expected size
08 12 0BF5 635 BNEQ 5$
50 0200 8F 3C 0BF7 636 MOVZWL #512,R0
000A 31 0BFC 637 BRW 10$
07 57 E8 0BFF 638 5$: BLBS R7,10$ ; branch unless alternate
50 50 6E D0 0C02 639 MOVL (SP),R0 ; get alternate record size
50 01 A0 9A 0C05 640 MOVZBL 1(R0),R0 ; size right?
22 A9 50 B1 0C09 641 10$: CMPW R0,RAB$W_RSZ(R9) ; branch if right
1D 13 0C0D 642 BEQL LP2
0C0F 643 FIELD <RSZ>
0C24 644 MBPT
28 B9 50 57 6E 00 2D 0C2C 645 LP2: CMPC5 #0,(SP),R7,R0,@RAB$L_RBF(R9); record contents ok?
1D 13 0C33 646 BEQL LP3 ; branch if yes
0C35 647 FIELD <RBF (BAD RECORD CONTENTS)>
0C4A 648 MBPT
03 F3C9 CF 91 0C52 649 LP3: CMPB MTA$FAB+FAB$B_RFM,#FAB$C_VFC
23 12 0C57 650 BNEQ LP4 ; branch if not vfc rfm
57 2C B9 D1 0C59 651 CMPL @RAB$L_RHB(R9),R7 ; rhb contents ok?
1D 13 0C5D 652 BEQL LP4
0C5F 653 FIELD <RHB>
0C74 654 MBPT
FF20 57 01 7A 8F 9D 0C7C 655 LP4: ACBB #^X7A,#1,R7,LOOP1
6E 02 C0 0C83 656 ADDL2 #2,(SP) ; bump past args
05 0C86 657 RSB
```

```
0C87 659
0C87 660 ;
0C87 661 ; subroutine to check for at eof and close mt file
0C87 662 ;
0C87 663 ;
0C87 664 EOF_CLOSE:
03 10 0C87 665 BSBB CHKEOF
FE36 31 0C89 666 BRW CLOSE_MT
0C8C 667
0C8C 668
0C8C 669 ;
0C8C 670 ; subroutine to check for at eof
0C8C 671 ;
0C8C 672 ;
0C8C 673 CHKEOF: $GET R9 ; expect eof
0C95 674 CHKEOF1:
00000000'8F 50 D1 0C95 675 CMPL R0,#RMS$_EOF
06 13 0C9C 676 BEQL CK5
5A 59 D0 0C9E 677 MOVL R9,R10
F35C' 30 0CA1 678 BSBW EOFPUT ; give error mesg's
05 0CA4 679 CK5: RSB
0CA5 680
0CA5 681
0CA5 682 ;
0CA5 683 ; subroutine to check for error code = rms$_bof
0CA5 684 ;
0CA5 685
00000000'8F 50 D1 0CA5 686 CHKB0F: CMPL R0,#RMS$_BOF
1E 13 0CAC 687 BEQL CKBEND
5A 59 D0 0CAE 688 MOVL R9,R10
F34C' 30 0CB1 689 BSBW REPORT_ERR
F334' 30 0CB4 690 FIELD <STS (EXPECTED RMS$_BOF)>
05 0CC9 691 BSBW ERR
0CCC 692 CKBEND: RSB
0CCD 693
0CCD 694
0CCD 695 .END
```


=	000000003		D	
=	000000006		D	
=	000000002		D	
=	000000019		D	
=	000000001		D	
=	000000004		D	
=	000000001		D	
=	000000000		D	
=	00000000A		D	
=	000000008		D	
=	000000000		D	
=	00000000B		D	
=	000000007		D	
=	000000002		D	
=	000000004		D	
=	00000003C		D	
=	000000048		D	
=	000000036		D	
	*****	X		01
	*****	X		01
	*****	X		01
	*****	X		01
=	000000005		D	
=	00000200	G	D	
	00000094	RG	D	01
	00000ADA	R	D	01
	00000BA3	R	D	01
	00000BF1	R	D	01
	00000C2C	R	D	01
	00000C52	R	D	01
	00000C7C	R	D	01
	00000000	R	D	01
	00000050	R	D	01
	0000029D	R	D	01
	000002A7	R	D	01
	00000298	R	D	01
	000002A2	R	D	01
	00000903	R	D	01
	00000927	R	D	01
	00000945	R	D	01
	0000094E	R	D	01
	000009D7	R	D	01
	00000A2E	R	D	01
	000002AC	R	D	01
	0000083B	R	D	01
	00000A8B	R	D	01
	00000AAA	R	D	01
	00000B38	R	D	01
	00000B78	R	D	01
	00000B9A	R	D	01
	00000AD7	R	D	01
=	00000001E		D	
=	000000001		D	
=	000000044		D	
=	000000001		D	
=	000000000		D	
=	000000038		D	

RMSTEST6
Symbol table

TEST MAGTAPE ;

N 12

16-SEP-1984 01:49:14 VAX/VMS Macro V04-00
5-SEP-1984 04:22:01 [UETP.SRC]RMSTEST6.MAR;1

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(22)

RABSL_CTX	= 00000018	D	
RABSL_FAB	= 0000003C	D	
RABSL_KBF	= 00000030	D	
RABSL_RBF	= 00000028	D	
RABSL_RHB	= 0000002C	D	
RABSL_ROP	= 00000004	D	
RABSM_TPT	= 00000002	D	
RABSV_LOC	= 00000010	D	
RABSW_RSZ	= 00000022	D	
READ_MT	00000BA0	R	D 01
READ_MT VAR	00000B9B	R	D 01
REPORT_ERR	*****	X	01
REPORT_ERROR	*****	X	01
RHBBUF	*****	X	01
RMSS_BOF	*****	X	01
RMSS_CREATED	*****	X	01
RMSS_EOF	*****	X	01
RMSS_NORMAL	*****	X	01
RMT1	00000425	R	D 01
RMT11	000006BB	R	D 01
RMT12	00000715	R	D 01
RMT2	00000449	R	D 01
RMT3	00000465	R	D 01
RMT4	0000049E	R	D 01
RMT5	000004BC	R	D 01
RMT6	000004D7	R	D 01
RMT7	0000050E	R	D 01
RMT8	00000532	R	D 01
RMT9	0000054D	R	D 01
STRMT	0000031E	R	D 01
SYSSCLOSE	*****	GX	01
SYSSCONNECT	*****	GX	01
SYSSCREATE	*****	GX	01
SYSSDISCONNECT	*****	GX	01
SYSSERASE	*****	GX	01
SYSSGET	*****	GX	01
SYSSNXTVOL	*****	GX	01
SYSSOPEN	*****	GX	01
SYSSPUT	*****	GX	01
SYSSREWIND	*****	GX	01
SYSSSPACE	*****	GX	01
SYSSTRUNCATE	*****	GX	01
T6START	00000000	RG	D 01
T6\$MTA	000002B1	RG	D 01
VERBOSITY	*****	X	01

+-----+
! Psect synopsis !
+-----+

PSECT name	Allocation	PSECT No.	Attributes
ABS	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
RMSTEST	000000CD (3277.)	01 (1.)	NOPIC USR CON REL GBL NOSHR EXE RD WRT NOVEC LONG
\$ABSS	00000000 (0.)	02 (2.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
\$RMSNAM	0000000E (14.)	03 (3.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE
--\$RMSNAM	00000241 (577.)	04 (4.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

+-----+
! Performance indicators !
+-----+

Phase	Page faults	CPU Time	Elapsed Time
-----	-----	-----	-----
Initialization	29	00:00:00.08	00:00:00.52
Command processing	105	00:00:00.56	00:00:03.36
Pass 1	431	00:00:25.02	00:00:54.87
Symbol table sort	0	00:00:00.56	00:00:01.23
Pass 2	141	00:00:04.74	00:00:12.35
Symbol table output	20	00:00:00.15	00:00:00.35
Psect synopsis output	2	00:00:00.02	00:00:00.03
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	730	00:00:31.15	00:01:12.72

The working set limit was 1500 pages.
115188 bytes (225 pages) of virtual memory were used to buffer the intermediate code.
There were 30 pages of symbol table space allocated to hold 479 non-local and 17 local symbols.
695 source lines were read in Pass 1, producing 50 object records in Pass 2.
68 pages of virtual memory were used to define 50 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name	Macros defined
-----	-----
_\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	0
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2	37
TOTALS (all libraries)	37

945 GETS were required to define 37 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:RMSTEST6/OBJ=OBJ\$:RMSTEST6 MSRC\$:RMSTEST6/UPDATE=(ENH\$:RMSTEST6)+EXECML\$/LIB

0409

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