

SSSSSSSS	YY	YY	SSSSSSSS	LL	000000	GGGGGGGG	NN	NN	AAAAAA	MM	MM	
SSSSSSSS	YY	YY	SS	LL	000000	GGGGGGGG	NN	NN	AAAAAA	MM	MM	
SS	YY	YY	SS	LL	00	00	GG	NN	AA	AA	MMMM	MMMM
SS	YY	YY	SS	LL	00	00	GG	NN	AA	AA	MMMM	MMMM
SS	YY	YY	SS	LL	00	00	GG	NNNN	NN	AA	AA	MM MM MM
SS	YY	YY	SS	LL	00	00	GG	NNNN	NN	AA	AA	MM MM MM
SSSSSS	YY	SSSSSS	LL	00	00	GG	NN	NN	AA	AA	MM	MM
SSSSSS	YY	SSSSSS	LL	00	00	GG	NN	NN	AA	AA	MM	MM
SS	YY	SS	LL	00	00	GG	GGGGGG	NN	NNNN	AAAAAAA	MM	MM
SS	YY	SS	LL	00	00	GG	GGGGGG	NN	NNNN	AAAAAAA	MM	MM
SS	YY	SS	LL	00	00	GG	GG	NN	NN	AA	AA	MM MM
SS	YY	SS	LL	00	00	GG	GG	NN	NN	AA	AA	MM MM
SSSSSSSS	YY	SSSSSSSS	LLLLLLLL	000000	GGGGGG	NN	NN	NN	NN	AA	AA	MM MM
SSSSSSSS	YY	SSSSSSSS	LLLLLLLL	000000	GGGGGG	NN	NN	NN	NN	AA	AA	MM MM

LL	IIIIII	SSSSSSSS
LL	IIIIII	SSSSSSSS
LL	II	SS
LL	II	SS
LL	II	SS
LL	II	SSSSSS
LL	II	SSSSSS
LL	II	SS
LLLLLLLL	IIIIII	SSSSSSSS
LLLLLLLL	IIIIII	SSSSSSSS

- (3) 236 CREATE Logical Name
(4) 334 Check table number, privileges and logical name string
(5) 369 DELETE Logical Name
(6) 441 TRANSLATE Logical Name
(7) 669 LNM\$SIGTORET - TURN SSS_NOLOGNAM EXCEPTION INTO RETURN STATUS

0000 1 .TITLE SYSLOGNAM - Old System Service Interface to Logical Names
0000 2 .IDENT 'V04-000'
0000 3
0000 4
0000 5 *****
0000 6 *
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0000 24 *
0000 25 *
0000 26 *****
0000 27
0000 28 D. N. CUTLER 10-OCT-76
0000 29
0000 30 Old System Services Interfaces to Manipulate Logical Names
0000 31
0000 32 \$CRELOG - CREATE Logical Name
0000 33 \$DELLOG - DELETE Logical Name
0000 34 \$TRNLOG - TRANSLATE Logical Name
0000 35
0000 36 The arguments are probed by these routines before they are passed off
0000 37 to the new system services so that the previous access mode is correct.
0000 38 The new system services are call thru the CMKRNL dispatcher so that the
0000 39 previous mode is CMKRNL so that literal data in this code can be accessed.
0000 40
0000 41
0000 42 MODIFICATION HISTORY:
0000 43
0000 44 V03-014 MSH0053 Michael S. Harvey 29-May-1984
0000 45 Probe argument lists for \$CRELOG, \$TRNLOG and \$DELLOG to
0000 46 ensure accessibility. Also, make sure that the minimum
0000 47 number of arguments for these services has been specified.
0000 48 This ensures that behavior observed prior to these services
0000 49 becoming caller's mode services is maintained.
0000 50
0000 51 V03-013 TMK0003 Todd M. Katz 15-Nov-1983
0000 52 Fix a bug introduced by TMK0002. The address of \$TRNLOG's
0000 53 optional output table parameter must be loaded into R8
0000 54 before R8 is ever referenced. With the TMK0002 change if the
0000 55 logical name started with an underscore (and no translation
0000 56 is attempted), or DSBMSK specified that no table was to be
0000 57 searched, then R8 was never being initialized before it was

0000 58 : referenced. As one might imagine, this lead to unpredictable results.

0000 59

0000 60

0000 61 V03-012 TMK0002 Todd M. Katz 19-Nov-1983
Optimize \$STRNLOG in those cases when the caller has not requested that the table in which the translated logical name was found be returned. The caller requested that the table be returned by specifying the optional system service output parameter TABLE. The optimization consists of calling \$STRNLNM only once giving as the table name a logical name that equates to the list of one or more tables that the caller wants searched for the target logical name. The logical names that may potentially serve as table names are created at system initialization time. The optional system service input parameter DSBMSK is used to select which logical name is used as the table name. The reason why this optimization is applicable only when TABLE has not been specified is because it is not obvious as to which table the logical name was found when \$STRNLNM is presented with a list of tables to search. Thus, the TABLE information could not be appropriately returned.

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0000 79 V03-011 TMK0001 Todd M. Katz 23-Oct-1983
Change the logical name table names that these old services use. Replace LNMS\$PROCESS with LOG\$PROCESS, LNMS\$GROUP with LOG\$GROUP, and LNMS\$SYSTEM with LOG\$SYSTEM. These logical names which serve as table names for all three of the old system services (SYSSCRELOG, SYSSDELLOG, and SYS\$TRNLOG) are setup at system initialization time, and maybe changed by users in order for them to make use of the features of the new logical name services without converting existing programs to use the new services.

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0000 90 V03-010 RAS0175 Ron Schaefer 28-Jul-1983
Add support in \$CRELOG to strip a leading "" and set LNMS\$ TERMINAL; remove recognition of LNMS\$ CONCEALED from \$STRNLOG; and make \$STRNLOG recognize PPF-format names.

0000 91

0000 92

0000 93

0000 94

0000 95 V03-009 RAS0167 Ron Schaefer 21-Jul-1983
Add special condition handler to \$STRNLOG in order to properly process programs with system service failure mode exception enabled.

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0000 100 V03-008 RAS0171 Ron Schaefer 20-Jul-1983
Make the register masks in RAS0170 be constant and not relocatable.

0000 101

0000 102

0000 103

0000 104 V03-007 RAS0170 Ron Schaefer 18-Jul-1983
Fixed trashed registers from a MOVC3 when prefixing "-"'s in \$STRNLOG.

0000 105

0000 106

0000 107

0000 108 V03-006 RAS0165 Ron Schaefer 5-Jul-1983
Eliminate the access mode argument to \$STRNLNM from \$STRNLOG. Make sure there is a non-kernel mode access mode argument for SCRELOG and SDELLOG.

0000 109

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0000 111

0000 112

0000 113 V03-005 DMW4059 DMWalp 23-Jun-1983
Change \$xxLNM value parameters to be by reference

0000 114

0000	115			
0000	116	V03-004 DMW4055	DMWalp	22-Jun-1983
0000	117	Make system services to be mode of caller. Removed all		
0000	118	priv checks, probes and added condition handler setup.		
0000	119			
0000	120	V03-003 DMW4049	DMWalp	15-Jun-1983
0000	121	Save R0 during MOVC\$		
0000	122			
0000	123	V03-002 DMW4030	DMWalp	20-Oct-1982
0000	124	Rewrite to call new system services.		
0000	125			
0000	126	V03-001 KDM0002	Kathleen D. Morse	28-Jun-1982
0000	127	Added SPRDEF.		
0000	128			

```

0000 131 : MACRO library calls
0000 132 : MACRO library calls
0000 133 : MACRO library calls
0000 134 $CHFDEF ; define condition handling
0000 135 $CRELOGDEF ; define CRELOG symbols
0000 136 $CRELNMDDEF ; define CRELNMD arglist
0000 137 $DELLOGDEF ; define DELLOG symbols
0000 138 $DELLNMDEF ; define DELLNM arglist
0000 139 $TRNLOGDEF ; define TRNLOG symbols
0000 140 $TRNLNMDEF ; define TRNLNM arglist
0000 141 $LNMDDEF ; define new log nam offsets
0000 142 $LOGDEF ; define log offsets
0000 143 $PSLDEF ; define PSL offsets
0000 144 $SSSDEF ; define system status values
0000 145
0000 146 : LOCAL SYMBOLS
0000 147 : LOCAL SYMBOLS
0000 148 : argument list offset definitions for CREATE logical name
0000 149 :
0000 150 :
00000004 0000 151 TBLFLG = 4 ; logical name table number
00000008 0000 152 LOGNAM = 8 ; address of logical name string
0000000C 0000 153 EQLNAM = 12 ; descriptor
0000000C 0000 154 EQLNAM = 12 ; address of equivalence name string
0000000C 0000 155 EQLNAM = 12 ; descriptor
00000010 0000 156 CRACMODE = 16 ; access mode
0000 157
0000 158 :
0000 159 : argument list offset definitions for DELETE logical name
0000 160 :
00000004 0000 161 TBLFLG = 4 ; logical name table number
00000008 0000 162 LOGNAM = 8 ; address of logical name string
0000000C 0000 163 DLACMODE = 12 ; descriptor
0000000C 0000 164 DLACMODE = 12 ; access mode
0000 165
0000 166 :
0000 167 : argument list offset definitions for TRANSLATE logical name
0000 168 :
00000004 0000 169 TRLOGNAM = 4 ; address of logical name string
00000008 0000 170 RSLLEN = 8 ; descriptor
0000000C 0000 171 RSLLEN = 8 ; address to store length of result
00000010 0000 172 RSLBUF = 12 ; string
00000010 0000 173 RSLBUF = 12 ; address of result buffer descriptor
00000014 0000 174 TABLE = 16 ; address to store translation table
00000014 0000 175 TABLE = 16 ; number
00000018 0000 176 TRACMODE = 20 ; address to store assignment access
00000018 0000 177 TRACMODE = 20 ; mode
00000018 0000 178 DSBMSK = 24 ; table search disable mask
0000 179
0000 180 :
0000 181 : local area storage defination for SCRELNMD call
0000 182 :
00000000 0000 183 RET_TRANSIZE = 0 ; the returned translation size
00000004 0000 184 RET_TRANATTR = 4 ; the returned translation attributes
00000008 0000 185 RET_ACMode = 8 ; the returned access mode
0000000C 0000 186 IN_ACMode = 12 ; the input access mode
00000010 0000 187 LOCAL_AREA = 16 ; the number of byte the above take

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0000001B 0000 188      189 ESCAPE = 27 ; ASCII escape char for PPFs
00000000 0000 190
00000000 0000 191 .PSECT YF$SYSLOGNAM
00000000 0000 192
00000000 0000 193 ; Literal string definitions
00000000 0000 194
00000028' 0000 195 TABLE_NAME_LIST: ; array of descriptor addresses
0000003A' 0004 196 .ADDRESS SYSTEM_TABLE ; pointer to system table name
0000004B' 0008 197 .ADDRESS GROUP_TABLE ; pointer to group table name
0000000C    000C 198 .ADDRESS PROCESS_TABLE ; pointer to process table name
000000B5' 000C 200 TRNLOG_TABLE: ; array of desc addrs equated to DSBMSK
0000007A' 0010 201 .ADDRESS PGS_TABLE ; DSBMSK = 0 -> PROCESS, GROUP, & SYSTEM
00000097' 0014 202 .ADDRESS PG_TABLE ; DSBMSK = 1 -> PROCESS & GROUP
0000004B' 0018 203 .ADDRESS PS_TABLE ; DSBMSK = 2 -> PROCESS & SYSTEM
0000005E' 001C 204 .ADDRESS PROCESS_TABLE ; DSBMSK = 3 -> PROCESS
0000003A' 0020 205 .ADDRESS GS_TABLE ; DSBMSK = 4 -> GROUP & SYSTEM
00000028' 0024 206 .ADDRESS GROUP_TABLE ; DSBMSK = 5 -> GROUP
00000028    0028 207 .ADDRESS SYSTEM_TABLE ; DSBMSK = 6 -> SYSTEM
59 53 24 47 4F 4C 00000030'010E0000' 0028
        4D 45 54 53 0036
52 47 24 47 4F 4C 00000042'010E0000' 003A
        50 55 4F 0048
52 50 24 47 4F 4C 00000053'010E0000' 004B
        53 53 45 43 4F 0059
0000005E    005E 209 SYSTEM_TABLE: ; system table name
        .ASCID "LOG$SYSTEM"
210
54 53 59 53 5F 50 55 4F 52 47 5F 24 005E
        4D 45 006C
211 GROUP_TABLE: ; group table name
        .ASCID "LOG$GROUP"
212
54 53 59 53 5F 50 55 4F 52 47 5F 24 006C
        4D 45 0078
213 PROCESS_TABLE: ; process table name
        .ASCID "LOG$PROCESS"
214
215 GS_TABLE: ; group and system table names
        .ASCID "TRNLOG$_GROUP_SYSTEM"
216
217
218 PG_TABLE: ; process and group table names
        .ASCID "TRNLOG$_PROCESS_GROUP"
219
220
221 PS_TABLE: ; process and system table names
        .ASCID "TRNLOG$_PROCESS_SYSTEM"
222
223
224 PGS_TABLE: ; process, group, and system table names
        .ASCID "TRNLOG$_PROCESS_GROUP_SYSTEM"
225
226
227 TABLE_MODE: ; System Table is exec mode
        .BYTE 1, 3 ; Group Table is user mode
228
229
230
231 LNM_TERM: ; terminal attribute for SCRELNM
        .LONG LNMSM_TERMINAL
232
233

```

```

00DF 236 .SBTTL CREATE Logical Name
00DF 237 + EXE$CRELOG - CREATE Logical Name
00DF 238 This service provides the capability to insert a logical name equivalence
00DF 239 into either the process, group, or system logical name table via the old
00DF 240 system service interface.
00DF 241
00DF 242
00DF 243
00DF 244 INPUTS:
00DF 245
00DF 246 TBLFLG (AP) = logical name table number.
00DF 247 LOGNAM (AP) = address of logical name string descriptor.
00DF 248 EQLNAM (AP) = address of equivalence name string descriptor.
00DF 249 CRACMODE (AP) = access mode of logical name to be created.
00DF 250
00DF 251 OUTPUTS:
00DF 252
00DF 253 R0 low bit clear indicates failure to create logical name table entry.
00DF 254 R0 = exception turned in return status
00DF 255 R0 = status returned from new service
00DF 256
00DF 257 R0 low bit set indicates successful completion.
00DF 258 R0 = status returned from new service
00DF 259
00DF 260
00DF 261
01DC 00DF 262 .ENTRY EXE$CRELOG,^M<R2,R3,R4,R6,R7,R8>
00E1 263
00E1 264 Only registers R0-R4 are used, the other registers are saved for
00E1 265 compatibility with old versions of the service
00E1 266
00E1 267
00E1 268
00E1 269 Return exception as return status
00E1 270
6D 00000000'EF 9E 00E1 271 MOVAB L^EXESSIGTORET,(FP)
00E8 272
00E8 273
00E8 274 Verify that the argument list is accessible and has the minimum
00E8 275 number of arguments for successful execution of the service.
00E8 276
00E8 277 ASSUME CRELOG$ NARGS LT 128
00E8 278 CMPB (AP),#CRELOG$_NARGS ; Minimum number of arguments specified?
00E8 279 BLSSU INSARG ; If LSSU, no, return error status
00E8 280 TSTL <(CRELOG$_NARGS*4>)(AP) ; Touch last argument, verify accessibility
00F0 281
00F0 282
00F0 283
00F0 284
04 6C 91 00E8 285 : Calculate access mode and check table number
00E8 286 EXTZV #0,#2,CRACMODE(AP),R2 ; get caller specified access mode
10 7C 1F 00EB 287 BSBW CHECKOUT ; check table number and privilege
AC D5 00ED 288
00F0 289
00F0 290
00F0 291
52 10 AC 02 00 EF 00F0 292 : Set up itemlist for $CRELNMM
004D 30 00F6 293 : Default index ( LNMS_INDEX ) of zero
00F9 294
00F9 295
00F9 296
00F9 297
7E 7C 00F9 298 CLRQ -(SP) ; end of list, return size not needed

```

50	OC	54	D4	00FB	293	CLRL	R4		flag no attributes	
61	5F	BC	7D	00FD	294	MOVQ	@EQLNAM(AP),R0		get equiv. name descriptor	
	8F	91	0101		295	CMPB	#^A_,(R1)		Leading '_'?	
	06	12	0105		296	BNEQ	10\$		nope	
	50	D7	0107		297	DECL	R0		reduce size	
	51	D6	0109		298	INCL	R1		advance ptr	
	54	D6	010B		299	INCL	R4		flag terminal attribute	
02	AE	50	7D	010D	300	10\$:	MOVQ		equivalence name descriptor	
	02	B0	0110		301	MOVW	#LNMS_STRING,2(SP)		stuff the item list code	
	0B	54	E9	0114	302	BLBC	R4,20\$		need an attribute item?	
	7E	D4	0117		303	CLRL	-(SP)		no return len	
	BF	AF	DF	0119	304	PUSHAL	LNMS TERM		point to terminal attribute	
00030004	8F	DD	011C		305	PUSHL	#<4<LNMS_ATTRIBUTES@16>>		; item code and size	
	50	5E	DO	0122	306	20\$:	MOVL		save the pointer to the list	
	52	DD	012B		307	MOVL	SP,R0		level of indirection	
	04	DD	012D		308	PUSHL	R2		save access mode for reference	
51	FED6	CF43	DO	0125	309	PUSHL	#LNMSM_CRELOG		save attributes for reference	
	52	5E	DO	012F	310	MOVL	SP,R2		save pointer to ACMODE and ATTR	
		0132		311						
		0132		312						
		0132		313						
		0132		314						
		0132		315	:				: Call System Service	
		0132		316	:	\$CRELNMS_S	ATTR = (R2),-			
		0132		317	:		TABNAM = (R1),-			
		0132		318	:		LOGNAM = @LOGNAM(AP),-			
		0132		319	:		ACMODE = 4(R2),-			
		60	DF	0132	320		ITMLST = (R0)			
				0134	321	PUSHAL	(R0)			
04	A2	DF	0134		322	ASSUME	CRELNMS_ITMLST EQ CRELNMS_ACMODE+4			
				0137	323	PUSHAL	4(R2)			
08	BC	DF	0137		324	ASSUME	CRELNMS_ACMODE EQ CRELNMS_LOGNAM+4			
				013A	325	PUSHAL	@LOGNAM(AP)			
		61	DF	013A	326	ASSUME	CRELNMS_LOGNAM EQ CRELNMS_TABNAM+4			
				013C	327	PUSHAL	(R1)			
		62	DF	013C	328	ASSUME	CRELNMS_TABNAM EQ CRELNMS_ATTR+4			
				013E	329	PUSHAL	(R2)			
		80000000'9F	05	FB	013E	330	ASSUME	CRELNMS_NARGS EQ 5		
				04	0145	331	CALLS	#CRELNMS_NARGS,@#SYSSCRELM - P1SYSVECTORS + ^X80000000		
							RET			

0146 334 .SBTTL Check table number, privileges and logical name string
0146 335 ;
0146 336 ; Check table number, and access mode
0146 337 ;
0146 338 CHECKOUT: ; check table number and access mode
0146 339 ;
0146 340 ; Logical name table number checkout
0146 341 ;
53 04 AC 9A 0146 342 MOVZBL TBLFLG(AP),R3 ; get logical name table number
53 02 D1 014A 343 CMPL #LOGSC_PROCESS,R3 ; legal table number?
08 19 014D 344 BLSS 10\$; number greater than 2
0C 13 014F 345 BEQL 20\$; number was 2 (process table)
0151 346 ;
0151 347 ;
0151 348 ; Set up access mode for group and system tables
0151 349 ;
52 84 AF43 9A 0151 350 MOVZBL TABLE_MODE[R3],R2 ; convert table to acmode
05 0156 351 ; group is user mode, system is exec
0156 352 RSB ;
0157 353 ;
50 015C 8F 3C 0157 354 10\$: MOVZWL #SSS_IVLOGTAB,R0 ; set invalid logical name table number
04 015C 355 RET ;
015D 356 ;
52 07 05 015D 357 20\$: TSTL R2 ; was an access mode given?
12 015F 358 BNEQ 30\$; use it if so
52 52 02 18 0161 359 MOVPSL R2 ; otherwise use mode of caller
EF 0163 360 EXTZV #PSL\$V_CURMOD,#PSL\$S_CURMOD,R2,R2
05 0168 361 30\$: RSB ;
0169 362 ;
0169 363 ;
0169 364 ;
50 0114 8F 3C 0169 365 INSARG: MOVZWL #SSS_INSFARG,R0 ; Report incorrect arg list count
04 016E 366 RET ;

016F 369 .SBTTL DELETE Logical Name
 016F 370 :+ EXE\$DELLOG - DELETE Logical Name
 016F 371 : This service provides the capability to delete a previously created logical
 name equivalence from either the process, group, or system logical
 name table via the old system service interface.
 016F 372 :
 016F 373 :
 016F 374 :
 016F 375 :
 016F 376 :
 016F 377 :
 016F 378 :
 016F 379 :
 016F 380 :
 016F 381 :
 016F 382 :
 016F 383 :
 016F 384 :
 016F 385 :
 016F 386 :
 016F 387 :
 016F 388 :
 016F 389 :
 016F 390 :
 016F 391 :
 016F 392 :
 016F 393 :
 016F 394 :
 01FC 395 ENTRY EXE\$DELLOG,"M<R2,R3,R4,R5,R6,R7,R8>
 0171 396 :
 0171 397 : Only registers R0-R3 are used, the other registers are saved for
 0171 398 : compatibility with old versions of the service
 0171 399 :
 0171 400 :
 0171 401 :
 0171 402 : Return exception as return status
 0171 403 :
 6D 00000000'EF 9E 0171 404 MOVAB L^EXESSIGTORET,(FP)
 0178 405 :
 0178 406 : Verify that the argument list is accessible and has the minimum
 0178 407 : number of arguments for successful execution of the service.
 0178 408 :
 0178 409 :
 0178 410 ASSUME DELLOG\$,NARGS LT 128
 03 6C 91 0178 411 CMPB (AP),#DELLOG\$,NARGS : Minimum number of arguments specified?
 EC 1F 017B 412 BLSSU INSARG : If LSSU, no, return error status
 OC AC D5 017D 413 TSTL <DELLOG\$,NARGS*4>(AP) : Touch last argument, verify accessibility
 0180 414 :
 0180 415 :
 0180 416 : Calculate access mode and check table number
 0180 417 :
 52 OC AC 02 00 EF 0180 418 EXTZV #0,#2,DLACMODE(AP),R2 : get specified access mode
 FFB0 30 0186 419 BSBW CHECKOUT : check table number and privileges
 0189 420 :
 0189 421 MOVL TABLE_NAME_LIST[R3],R1 ; level of indirection
 018F 422 :
 52 52 DD 018F 423 PUSHL R2 : save access mode for reference
 52 5E DO 0191 424 MOVL SP,R2 : save pointer to ACMODE
 0194 425 :

```
0194 426 : Call System Service
0194 427 :
0194 428 : $DELLNM_S TABNAM = (R1),-
0194 429 : LOGNAM = @LOGNAM(AP),-
0194 430 : ACMODE = (R2)
62 DF 0194 431 PUSHAL (R2)
0196 432 ASSUME DELLNMS ACMODE EQ DELLNMS_LOGNAM+4
08 BC DF 0196 433 PUSHAL @LOGNAM(AP)
61 DF 0199 434 ASSUME DELLNMS_LOGNAM EQ DELLNMS_TABNAM+4
0199 435 PUSHAL (R1)
0198 436 ASSUME DELLNMS_NARGS EQ 3
80000000'9F 03 FB 0198 437 CALLS #DELLNM$_NARGS,@#SYSS$DELLNM - P1SYSVECTORS + ^X80000000
04 01A2 438 RET
```

01A3 441 .SBTTL TRANSLATE Logical Name
 01A3 442 + EXE\$TRNLOG - TRANSLATE Logical Name
 01A3 443 This service provides the capability to translate a logical name string
 01A3 444 to a resultant name string via old system service interface.

INPUTS:

01A3 450 TRLOGNAM (AP) = address of logical name string descriptor.
 01A3 451 RSLLEN (AP) = address to store length of result string.
 01A3 452 RSLBUF (AP) = address of resultant string buffer descriptor.
 01A3 453 TABLE (AP) = address to store translation table number.
 01A3 454 TRACMODE (AP) = address to store assignment access mode.
 01A3 455 DSBMSK (AP) = table search disable mask.

OUTPUTS:

01A3 456 R0 low bit clear indicates failure to translate logical name string.
 01A3 457 R0 = SSS_RESULTOVF - can not add "" or "" to output buffer.
 01A3 458 the buffer is too small
 01A3 459 R0 = exception turned in return status
 01A3 460 R0 = status returned from new service
 01A3 461 R0 low bit set indicates successful completion.
 01A3 462 R0 = status returned from new service

01FC 01A3 463 .ENTRY EXE\$TRNLOG,^M<R2,R3,R4,R5,R6,R7,R8>

01A3 464 : Return exception as return status

6D 00000000'EF 9E 01A3 465 MOVAB L^EXESSIGTORET,(FP)

01A3 466 : Verify that the argument list is accessible and has the minimum
 01A3 467 number of arguments for successful execution of the service.

01A3 468 01AC 468 ASSUME TRNLOGS NARGS LT 128
 01A3 469 CMPB #TRNLOGS_NARGS ; Minimum number of arguments specified?
 01A3 470 BLSSU INSARG ; If LSSU, no, return error status
 01A3 471 TSTL <TRNLOGS_NARGS*4>(AP) ; Touch last argument, verify accessibility

55 18 AC FFFFFFFF8 8F CB 01B4 472 BICL3 #^C^X07,DSBMSK(AP),R5 ; set table search disable mask
 58 10 AC D0 01BD 473 MOVL TABLE(AP),R8 ; pickup address of the table parameter

01C1 474 01C1 475 : Resultant string checkout

01C1 476 01C1 477 MOVL RSLBUF(AP),R4 ; get address of result string buffer
 01C1 478 01C5 478 descriptor

54 0C AC D0 01C1 479 MOVZWL (R4),R3 ; get size of result string buffer

54 53 64 3C 01C5 480 MOVL 4(R4),R4 ; get address of result string buffer

01CC 481 01CC 482 : Logical Name Checkout

01CC 483 01CC 484

```

      51 04 AC  D0 01CC 498 : get address of logical name string
      50 61 3C 01D0 500 : get length of logical name string
      51 04 A1  D0 01D3 501 : get address of logical name string
      51 DD 01D7 502 : local copy of lognam descriptor
      50 DD 01D9 503
      52 5E  D0 01DB 504 : remember the location of descriptor
      52          01DE 505
      52          01DE 506
      52          01DE 507 : Get local stack storage
      52          01DE 508
      56 10 C2 01DE 509
      56 5E  D0 01E1 510 : get a pointer to our local store
      56          01E4 511
      56          01E4 512
      56          01E4 513 : Test for no translation
      56          01E4 514
      61 5F 8F  91 01E4 515 : logical name start with underscore?
      03 12 01E8 516 : continue if no; otherwise,
      0081 31 01EA 517 : special case code for no translation
      61          01ED 518
      61          01ED 519
      61          01ED 520 : Build itemlist
      61          01ED 521
      08 7E 7C 01ED 522 5$: : end of list, no return length
      08 A6 DF 01EF 523 : area for returned access mode
      0060001 8F DD 01F2 524 : size of area and item code
      00          00  DD 01F8 525 : no return length
      0030004 04 A6 DF 01FA 526 : area for returned trans attributes
      0030004 8F DD 01FD 527 : size of area and item code
      00          66  D4 0203 528 : clear returned longword
      00          66  DF 0205 529 : return length of translation address
      00          64  DF 0207 530 : translation buffer address
      02 AE 02  B0 020B 531 : size of translation buffer
      00          00  DD 020F 532 : stuff the item list code
      00          6E  DF 0211 533 : no return length
      0010004 00          6E  DF 0213 534 : point to a zeroed longword (0 index)
      0010004 8F          00          6E  DF 0213 535 : stuff the item list code
      0010004          0219 536
      0010004          0219 537
      0010004          0219 538 : If TABLE has not been specified, then use DSBMSK to index into
      0010004          0219 539 : the list of logical name table names to obtain the address of
      0010004          0219 540 : the logical name to use as the table name in the single call to
      0010004          0219 541 : STRNLNM.
      0010004          0219 542
      0010004          0219 543
      07 55 03 00  ED 0219 544 : are any tables to be searched?
      07 55 03 00  49 13 021E 545 : return immediately if no
      0220 546
      51 FDE7 CF45  D0 0220 547 : assume TABLE has not been specified
      58 D5 0226 548 : TABLE specified?
      0D 13 0228 549 : must do table loop if so; otherwise,
      022A 550 : only one $TRNLNM need be done
      022A 551
      022A 552
      022A 553 : Loop thru the valid logical name tables.
      022A 554

```

D 11

```

      022A 555
      022A 556    10$: MOVZBL #2,R7
      022D 557    BBS R7,R5,40$ 
      0231 558
      0231 559
      0237 560
      0237 561
      0237 562
      0237 563
      0237 564 : ; Call system service
      0237 565 : ; $TRNLNM_S TABNAM = (R1),-
      0237 566 : ; LOGNAM = (R2)-
      0237 567 : ; ITMLST = -<4*13>(R6) ; 40 is 13 longwords of itemlist
CC A6 DF 0237 567 20$: PUSHAL -<4*13>(R6)
      023A 568 ASSUME TRNLNMS_ITMLST EQ TRNLNMS_ACMODE+4
      023A 569 PUSHL #0
      023C 570 ASSUME TRNLNMS_ACMODE EQ TRNLNMS_LOGNAM+4
      023C 571 PUSHAL (R2)
      023E 572 ASSUME TRNLNMS_LOGNAM EQ TRNLNMS_TABNAM+4
      023E 573 PUSHAL (R1)
      0240 574 ASSUME TRNLNMS_TABNAM EQ TRNLNMS_ATTR+4
      00 DD 0240 575 PUSHL #0
      0242 576 ASSUME TRNLNMS_NARGS EQ 5
      0242 577
      0242 578 MOVAB LNM$SIGTORET,(FP) ; special handler
      0249 579
      80000000'9F 05 FB 0249 580 CALLS #TRNLNMS_NARGS,@#SYS$TRNLNM - P1SYSVECTORS + ^X80000000
      6D 00000000'EF 9E 0250 581
      6D 00000000'EF 9E 0250 582 MOVAB L^EXESSIGTORET,(FP)
      0257 583
      0257 584
      0257 585 : Test if it worked ( Should only be SSS_NORMAL )
      0257 586 30 50 E8 0257 587 BLBS R0,CHECK_ATTR
      025A 588
      025A 589
      025A 590 : If no translation then try next table
      025A 591 else return error
      025A 592
      01BC 8F 50 B1 025A 593 CMPW R0,#SSS_NOLOGNAM
      01 13 025F 594 BEQL 30$ 
      04 0261 595 RET
      0262 596
      0262 597
      0262 598 : try next table if table looping is being done.
      0262 599
      0262 600
      58 D5 0262 601 30$: TSTL R8 ; is table looping being done?
      03 13 0264 602 BEQL 50$ ; done if no table looping
      C4 57 F4 0266 603 40$: SOBGEQ R7,10$ ; otherwise continue with next table
      0269 604
      0269 605
      0269 606 : Tried all tables with no luck
      0269 607
      50 62 7D 0269 608 50$: MOVQ (R2),R0
      04 11 026C 609 BRB NOTRANS2 ; special case code for no translation
      026E 610
      026E 611 :

```

		026E	612	; No translation, stuff the input into the output buffer				
		026E	613					
50	D7	026E	614	NOTTRANS: DECL	R0	; get rid of leading "_", decrease size		
51	D6	0270	615	INCL	R1	; bump pointer		
53	50	D1	0272	616	NOTTRANS2:			
55	1A	0275	617	CMPL	R0,R3	; is the output buffer big enough		
66	50	3C	0277	618	BGTRU	BUFOVR	; buffer to small, bail out	
64	61	50	027A	619	MOVZWL	RO,RET_TRANSIZE(R6)	; store result string length	
57	D4	027E	620	MOVC3	R0,(R1),(R4)	; stuff in user buffer		
08	A6	D4	0280	621	CLRL	R7	; zero the table number	
50	0629	8F	0283	622	CLRL	RET_ACMode(R6)	; zero the access mode	
27	11	0288	623	MOVZWL	#SSS_NOTTRAN,RO	; stuff old error code		
		0288	624	BRB	RET_VALUES	; rejoin for normal exit		
		028A	625					
		028A	626					
		028A	627	; Check if underscores need to be added				
		028A	628					
		028A	629	CHECK_ATTR:				
		028A	630					
		028A	631	; If actual size is greater than returned size				
		028A	632					
22	04	A6	09	E1	028A	633	BBC #LNMSV TERMINAL,RET_TRANATTR(R6),RET_VALUES	
51	66	D0	028F	634	MOVL	RET_TRANSIZE(R6),R1	; get actual size	
53	66	D6	0292	635	INCL	RET_TRANSIZE(R6)	; add "_" to count	
51	51	D1	0294	636	CMPL	R1,R3	; will string now fit?	
33	1E	0297	637	BGEQU	BUFOVR	; nope		
64	1B	B1	0299	638	CMPW	#ESCAPE,(R4)	; is this a PPF?	
06	12	029C	639	BNEQ	60\$; nope		
54	04	C0	029E	640	ADDL2	#4,R4	; insert "_" after PPF info	
51	04	C2	02A1	641	SUBL2	#4,R1		
11	BB	02A4	642	60\$: PUSHR	#^M<R0,R4>	; save status and start addr		
01	A4	64	51	02A6	643	MOVC3 R1,(R4),1(R4)	; shift right 1 character	
11	BA	02AB	644	POPR	#^M<R0,R4>	; restore registers		
64	5F	8F	90	02AD	645	MOVB #^A'_,(R4)	; stuff underscore	
		02B1	646					
		02B1	647					
		02B1	648	; Return the translation size, table number and access mode				
		02B1	649					
		02B1	650	RET_VALUES:				
51	08	AC	D0	02B1	651	MOVL RSLLEN(AP),R1	; get address to store result length	
03	13	02B5	652	BEQL	110\$; if not specified		
61	66	B0	02B7	653	MOVW RET_TRANSIZE(R6),(R1)	; store result string length		
58	D5	02BA	654	110\$: TSTL	R8	; is table number to be returned?		
03	13	02BC	655	BEQL	120\$; if not specified		
68	57	90	02BE	656	MOVB R7,(R8)	; store translation table number		
51	14	AC	D0	02C1	657	120\$: MOVL TRACMODE(AP),R1	; get address to store assignment	
		02C5	658	access mode				
61	04	13	02C5	659	BEQL 130\$; if not specified		
61	08	A6	90	02C7	660	MOVB RET_ACMode(R6),(R1)	; store assignment access mode	
		02CB	661	130\$: RET				
		02CC	662					
		02CC	663					
		02CC	664	; Buffer is too small				
		02CC	665					
50	0214	8F	3C	02CC	666	BUFOVR: MOVZWL #SSS_RESULTOVF,RO	; buffer specified too small	
		04	02D1	667	RET			

02D2 669 .SBTTL LNMSIGTORET - TURN SSS_NOLOGNAM EXCEPTION INTO RETURN STATUS
 02D2 670 ++
 02D2 671 FUNCTIONAL DESCRIPTION:
 02D2 672 THIS IS A CONDITION HANDLER THAT TURNS A SSS_NOLOGNAM
 02D2 673 EXCEPTION IN THE A LOWER
 02D2 674 FRAME INTO A RETURN FROM THE LOWER FRAME WITH THE EXCEPTION NAME
 02D2 675 AS THE STATUS. ALL OTHER EXCEPTIONS
 02D2 676 ARE RESIGNALLED. UNWINDS ARE IGNORED.
 02D2 677
 02D2 678
 02D2 679 INPUT PARAMETERS:
 02D2 680 00(AP) = NUMBER OF CONDITION ARGUMENTS.
 02D2 681 04(AP) = ADDRESS OF SIGNAL ARGUMENT LIST.
 02D2 682 08(AP) = ADDRESS OF MECHANISM ARGUMENT LIST.
 02D2 683
 02D2 684 OUTPUT PARAMETERS:
 02D2 685 R0 - COMPLETION STATUS CODE
 02D2 686 SSS_RESIGNAL - ALWAYS
 02D2 687
 02D2 688
 0000 02D2 689 LNMSIGTORET:
 02D2 690 .WORD 0
 02D4 691
 02D4 692 ASSUME CHF\$L_MCHARGLST,EQ,CHF\$L_SIGARGLST+4
 02D4 693
 04 A0 50 04 AC 7D 02D4 694 MOVQ CHF\$L_SIGARGLST(AP),R0 ; GET ADDRESS OF SIGNAL ARGUMENT LIST
 000001BC 8F D1 02D8 695 CMPL #SSS_NOLOGNAM,CHF\$L_SIG_NAME(R0) ; MAGIC ERROR?
 1B 13 02E0 696 BEQL 10\$; BRANCH TO EXIT IF NOT
 04 A0 0000045C 8F D1 02E2 697 CMPL #SSS_SSFAIL,CHF\$L_SIG_NAME(R0) ; OR SSFAIL?
 22 12 02EA 698 BNEQ 50\$; BRANCH TO EXIT IF NOT
 08 A0 000001BC 8F D1 02EC 699 CMPL #SSS_NOLOGNAM,CHF\$L_SIG_ARG1(R0) ; MAGIC ERROR?
 18 12 02F4 700 BNEQ 50\$; BRANCH TO EXIT IF NOT
 OC A1 08 A0 D0 02F6 701 MOVL CHF\$L_SIG_ARG1(R0),CHF\$L_MCH_SAVRO(R1) ; SET RETURN STATUS
 05 11 02FB 702 BRB 20\$
 OC A1 04 A0 D0 02FD 703 10\$: MOVL CHF\$L_SIG_NAME(R0),CHF\$L_MCH_SAVRO(R1) ; SET RETURN STATUS
 7E D4 0302 704 20\$: CLRL -(SP) ; CLEAR NEW PC ARGUMENT
 08 A1 9F 0304 705 PUSHAB CHF\$L_MCH_DEPTH(R1) ; NUMBER OF FRAMES TO UNWIND
 00000000'GF 02 FB 0307 706 CALLS #2,G^5YSSUNWIND ; UNWIND TO ESTABLISHER
 50 0918 8F 3C 030E 707 50\$: MOVZWL #SSS_RESIGNAL,R0 ; RETURN RESIGNAL STATUS
 04 0313 708
 0314 709
 0314 710 .END

\$\$ARGS	= 00000005		P1SYSVECTORS	***** X 02
\$\$T1	= 00000018		PGS_TABLE	000000B5 R 02
BUFOVR	= 000002CC R 02		PG_TABLE	0000007A R 02
CHECKOUT	= 00000146 R 02		PROCESS_TABLE	0000004B R 02
CHECK_ATTR	= 0000028A R 02		PSLSS_CURMOD	= 00000002
CHFSL_MCHARGLST	= 00000008		PSL\$V-CURMOD	= 00000018
CHFSL_MCH_DEPTH	= 00000008		PS_TABLE	= 00000097 R 02
CHFSL_MCH_SAVR0	= 0000000C		RET_ACMODE	= 00000008
CHFSL_SIGARGLST	= 00000004		RET_TRANATTR	= 00000004
CHFSL_SIG_ARG1	= 00000008		RET_TRANSIZE	= 00000000
CHFSL_SIG_NAME	= 00000004		RET_VALUES	000002B1 R 02
CRACMODE	= 00000010		RSLBUF	= 0000000C
CRELNMS_ACMODE	= 00000010		RSLLEN	= 00000008
CRELNMS_ATTR	= 00000004		SS\$_INSFARG	= 00000114
CRELNMS_ITMLST	= 00000014		SS\$_IVLOGTAB	= 0000015C
CRELNMS_LOGNAM	= 0000000C		SS\$_NOLOGNAM	= 000001BC
CRELNMS_NARGS	= 00000005		SS\$_NOTRAN	= 00000629
CRELNMS_TABNAM	= 00000008		SS\$_RESIGNAL	= 00000918
CRELOGS_ACMODE	= 00000010		SS\$_RESULTOVF	= 00000214
CRELOGS_EQLNAM	= 0000000C		SS\$_SSFAIL	= 0000045C
CRELOGS_LOGNAM	= 00000008		SY\$CRELNAM	***** X 02
CRELOGS_NARGS	= 00000004		SY\$DELLNM	***** X 02
CRELOGS_TBLFLG	= 00000004		SY\$TRNLNM	***** X 02
DELLNMS_ACMODE	= 0000000C		SY\$UNWIND	***** X 02
DELLNMS_LOGNAM	= 00000008		SYSTEM_TABLE	00000028 R 02
DELLNMS_NARGS	= 0000000C3		TABLE	= 00000010 R 02
DELLNMS_TABNAM	= 00000004		TABLE_MODE	= 000000D9 R 02
DELLOGS_ACMODE	= 0000000C		TABLE_NAME_LIST	= 00000000 R 02
DELLOGS_EQLNAM	= 00000008		TBLFLG	= 00000004
DELLOGS_NARGS	= 00000003		TRACMODE	= 00000014
DELLOGS_TPLFLG	= 00000004		TRLOGNAM	= 00000004
DLMODE	= 0000000C		TRNLNM\$_ACMODE	= 00000010
DSBMSK	= 00000018		TRNLNM\$_ATTR	= 00000004
EQLNAM	= 0000000C		TRNLNM\$_ITMLST	= 00000014
ESCAPE	= 0000001B		TRNLNM\$_LOGNAM	= 0000000C
EXESCRELOG	000000DF RG 02		TRNLNM\$_NARGS	= 00000005
EXESDELOG	0000016F RG 02		TRNLNM\$_TABNAM	= 00000008
EXESSIGTORET	***** X 02		TRNLOGS_ACMODE	= 00000014
EXESTRNLOG	000001A3 RG 02		TRNLOGS_DSBMSK	= 00000018
GROUP TABLE	0000003A R 02		TRNLOGS_EQLNAM	= 00000004
GS TABLE	0000005E R 02		TRNLOGS_NARGS	= 00000006
INSARG	00000169 R 02		TRNLOGS_RSLBUF	= 0000000C
IN ACMODE	= 0000000C		TRNLOGS_RSLLEN	= 00000008
LNM\$M_CRELOG	= 00000004		TRNLOGS_TABLE	= 00000010
LNM\$M_TERMINAL	= 00000200		TRNLOG_TABLE	0000000C R 02
LNM\$SIGTORET	000002D2 R 02			
LNM\$V TERMINAL	= 00000009			
LNMS_ACMODE	= 00000006			
LNMS_ATTRIBUTES	= 00000003			
LNMS_INDEX	= 00000001			
LNMS_STRING	= 00000002			
LNM_TERM	000000DB R 02			
LOCAL_AREA	= 00000010			
LOGSC_PROCESS	= 00000002			
LOGNAM	= 00000008			
NOTRANS	0000026E R 02			
NOTRANS2	00000272 R 02			

! Psect synopsis !

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$ABSS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
YF\$SYSLOGNAM	00000314 (788.)	02 (2.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	36	00:00:00.09	00:00:00.26
Command processing	129	00:00:00.56	00:00:01.33
Pass 1	260	00:00:06.78	00:00:15.05
Symbol table sort	0	00:00:00.88	00:00:01.61
Pass 2	135	00:00:01.94	00:00:04.19
Symbol table output	13	00:00:00.09	00:00:00.11
Psect synopsis output	2	00:00:00.02	00:00:00.05
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	577	00:00:10.37	00:00:22.60

The working set limit was 1500 pages.

39221 bytes (77 pages) of virtual memory were used to buffer the intermediate code.

There were 40 pages of symbol table space allocated to hold 588 non-local and 18 local symbols.

710 source lines were read in Pass 1, producing 22 object records in Pass 2.

20 pages of virtual memory were used to define 19 macros.

! Macro library statistics !

Macro library name	Macros defined
\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	1
\$255\$DUA28:[SYSLIB]STARLET.MLB;2	15
TOTALS (all libraries)	16

623 GETS were required to define 16 macros.

There were no errors, warnings or information messages.

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

0386 AH-BT13A-SE
VAX/VMS V4.0

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