

ASSIGN MICI (FILE,ALTCP,DOOCI)  
DATA INFORMATION IGNORED  
METASYM CI,LO,CN  
•END

ABORT	145/REF	923/BAZ	928/BL	931/BL			
ALTCP	30/DEF	253-EQU					
BADCAL	289/B 431/BE 573/BGE	365/B 435/BG 616/BGE	372/B 449/BGE 620/BEZ	373/B 456/BGE 676/B	375/B 462/B 1042-EQU	381/BLZ 463/B	387/BAZ 477/BLZ
BITS	6-SET						
BT31T00	951/LW						
BUFF1	414/LI						
CIETM	205/REF	1214/LW					
CIRT90	206/REF	1215/LW					
CALBAD	34/DEF	502/B	513/B	520/B	1044-EQU	1210/B	
CALCK	33/DEF	283-EQU					
CALMUL1	702/B	713-LI					
CALMUL2	371/B	716-LI					
CAL13	292/B	448-CI					
CAL14	293/B	454-EQU					
CAL15	294/B	471-EQU					
CAL16	295/B	571-EQU					
CAL16X	579-EQU	588/BANZ					
CAL16Y							

CAL17	578/BG	584-EQU					
CAL18	296/B	614-EQU					
CAL19MOD	297/B	674-CI					
CCLOSE#	344/BANZ	425-EQU					
CCORST	73/REF	716/LI					
CC1RST	39/DEF	566/B	776-EQU	1346/R			
CC1SET	40/DEF	714/LI	769/BCS	777-EQU			
CC2SET	38/DEF	550/BG	589/B	724/BAZ	753/BL	764/BLZ	766/BL
	785-LW	809/BAZ	1332/B				
CC3SET	41/DEF	760/BANZ	782-EQU				
CHKPR0T	746/B	750/B	780-LW				
CKLIMIT	143/REF	853/BAL	859/BAL	863/RAL			
CKLIM0K	43/DEF	1230-EQU					
CKLM1	1233/BEZ	1237/BANZ	1252-LC				
CNMPR0C0#	1244-BAL	1251/BLE					
CNMPR0C1#	102/REF	630/LI					
CNMPR0C2#	103/REF	631/LI					
CNMPR0C3#	104/REF	632/LI					
CNMPR0C4#	105/REF	633/LI					

	106/REF	634/LI					
C1TV							
	286/BLE	288•EQU	298/EQU				
C14TV							
	458/LI	461•EQU	469/EQU				
C16TV							
	575/AI	591•EQU	603/EQU				
C17TV							
	617/LI	629•EQU	637/EQU	647/EQU			
C17TVEND							
	615/CI	647•EQU					
C18A							
	675/BLE	708•LI					
C18TV							
	676•B	706/EQU	708/LI				
C19TV							
	359/BGE	360/EXU	364•EQU	377/EQU	439/BCR	445/B	
DCBLOOP							
	401•LW	408/B					
DEBUGSEG							
	88/REF	451/OVERLAY					
DELA							
	934/CI						
DELTAG0							
	144/REF	1000/B					
DIC							
	816/CI	819/AI	934/CI	938/CI			
D1							
	22•EQU	385/LW	386/CW	389/LW	391/STS	393/LW	395/STS
	780/LW	1275/LH	1276/STH	1281/SLD	1282/AND	1285/0R	1287/E0R
	1288/SCS	1289/AND	1290/SLD	1291/AND	1294/0R	1296/SLS	1297/0R
	1300/LB	1301/SLS	1302/SLD	1303/AND	1307/0R	1315/LW	1320/STS
	1321/STH	1321/STH	1323/STS				
D2							
	23•EQU	390/LW	394/LI	1268/LW	1283/AI	1292/AI	1300/LB
D3							
	1304/AND	1305/E0R	1306/AND	1319/LW	1322/LW		

	24= EQU	1267/LD	1274/LW	1306/AND	1307/BR	1308/STD	1323/STS <sup>4</sup>
D4							
	25= EQU						
EIAP							
	202/REF	836/LI					
ECBCHECK							
	108/REF	635/B					
ER0							
	199/REF	729/STS					
EXUIERR1							
	269=DATA	501/LW					
EXUIERR2							
	270=DATA	512/LW					
EXUIERR3							
	271=DATA	519/LW					
EXUCODE							
	267= EQU	472/CI					
EXU0K							
	500/BLE	504=CI					
EXU15							
	505/BANZ	508=LW					
EXU17							
	507/B	511/BCR	514-LB				
EXU18							
	519=LW	523/BAZ					
EXU19							
	518/BGEZ	521=LW					
FBL00P							
	413= EQU	421/B					
FF3FFFFF							
	214/REF	871/LW					
FLGILIC							
	276= EQU	1205/CI					
HICAL							
	285/CI	298= EQU					
HICAL18							
	674/CI	706= EQU					

INTRTN							
J:ABC	379/EQU	429/BE					
J:ALB	197/REF	727/STB					
J:BASE	190/REF	1038/LW					
	181/REF	506/AW	524/STW	527/STW	530/STW	532/LM*	533/LCF*
	534/EXU*	535/STCF*	537/STM*	752/LW*	970/STW	973/STW	975/LM*
	976/LCF*	978/STCF*	980/STM*	1143/AW	1147/AW		
J:DCBLINK							
	193/REF	399/LW	1150/LW				
J:EXTENT							
	189/REF	441/STS	807/LB	811/STB	1080/CW	1082/LB	1086/STB
J:JIT							
	177/REF	417/MTB	729/STS	768/LC	919/STH	1232/LW	
J:PLL							
	182/REF	964/CLM					
J:RNST							
	196/REF	385/LW	391/STS	726/STB			
J:TCB							
	183/REF	395/STS	849/LW	1024/AND	1028/STS	1310/LW	1313/STW
J:TEFLGS							
	198/REF	731/STS					
J:USENT							
	184/REF	1004/CW	1031/LW	1047/CW			
J:ICUR							
	180/REF	765/CB					
J:IMAX							
	179/REF	762/LB	767/STB				
J:IPRIV							
	178/REF	499/CB	549/CB	577/CB	872/LB	926/LB	1329/LB
J:STEPCC							
	191/REF	444/STB					
J:FBFP							
	192/REF	416/LI					
KRD1							

KRDE	758/BNE	762=LB		
KRD4	744/BE	748/BE	751=LI	
KRDE	742=LH	745/BDR		
L	740/BAZ	747=CB		
LDEV#	1034/LW			
LDLNK#	72/REF	713/LI		
LDLNKSEG	114/REF	1093/OVERLAY		
MIXX	89/REF	1093/OVERLAY	1099/OVERLAY	1227/LI
MASI	200/REF	410/LI		
MASTERCODE	1223/BANZ	1226=LI		
MCOUPLE	262=EGU	264/DATA		
MEXU	705/B	1098=EGU		
MFSI	473/BE	480=EGU		
MINT#	704/B	1221=EGU		
MISOVSEG	81/REF	690/LI		
MLNK	74/REF	362/LI	1151/OVFRT0	
MLNK1	678/B	679/B	1070=EGU	
MNOVLY	1081/BAZ	1084/BANZ	1092=RES	
	361=EGU	460/B	710/B	

M0NPR0C			
	3=SET		
MPP0			
	194/REF	918/LI	918/LI
MSC0DES			
	264=DATA	474/CLM	
MSEGLD			
	677/B	1128=EGU	
MSEGLDEX			
	1160/BEZ	1189=PULL	
MSTIMER#			
	85/REF	693/LI	
MSTRAP#			
	78/REF	369/LI	
MSTRAPXIT			
	42/DEF	901=EGU	
MSTRSLV			
	475/BCR	540=EGU	
MSTRUNC			
	376/B	398=EGU	
MS1			
	560/BIF	562=STS	
MTIME#			
	79/REF	692/LI	
MTRAP			
	696/B	1265=LI	
MTRAPX			
	1308=STD	1324/B	
MTRAP2			
	1284/BGE	1286=EGU	
MTRAP4			
	1293/BGE	1295=EGU	
MTRTN			
	370/B	433/BE	800=RES
MTRTNO			
	49/DEF	806/BEZ	813=RES
MTRTNOA			



MTRTNOB	829/BAZ	831/BG	835-MTB	
MTTIMER#	839/BAZ	845-LI		
MULSEG	86/REF	694/LI		
MXCON#	71/REF	717/LI		
M15	83/REF	701/LI		
M17	855/AND	891/AND		
M24	929/AND	1241/AND		
M32	284/AND			
M7	1287/EOR	1305/EOR		
M8	515/AND	1282/AND	1291/AND	
NB31T00	427/AND			
NC14S	209/REF	257/EQU	258/EQU	972/AND
NC16S	455/CI	469-EQU		
NC19S	572/CI	603-EQU		
NEWQ	358/CI	377-EQU		
N0PAD	156/REF	1343/LI		
NXTBLK	1173/BGE	1177-CD	1180/BNEZ	
OKOUT	1172-CI	1176/B		
	732/B	775-EQU		

OPCODES					
OPTBL	265=EGU	522/CI			
OUT	277=DATA	952/CW			
	37/DEF	779/B	781/B	784/B	789=EGU
P:NAME	161/REF	1177/CD			
PB:LCY	163/REF	830/MTB	840/MTB	844/MTB	
PB:LNK	162/REF	1159/LB	1179/LB		
PB:PSZ	165/REF	832/LB	842/LB		
PB:UC	166/REF	826/MTB	835/MTB		
QUEUE	152/REF	1341/LI			
QUEUE1	154/REF	1342/LI			
RESOURCE	697/B	698/B	699/B	700/B	737=EGU
RMAOVSEG	90/REF	581/LI			
RSTRTRAP	1269/BLZ	1315=LW			
RTALTCP	128/SREF	478/B			
RTCHK	45/DEF	1071/BAL	1129/BAL	1194=EGU	
RTCHKERR	1074/BCS	1132/BCS	1207=EGU		
RTERR	51/DEF	274=DATA	1209/LW		
RTICBHDR	204/REF	380/LW	476/LW		
RTINTRTN					

RO	130/SREF	382/B					
	10= EQU	369/LI	464/LI	465/LI	466/LI	467/LI	498/LI
	499/CB	548/LI	549/CB	592/LI	593/LI	602/LI	621/LW
	630/LI	631/LI	632/LI	633/LI	634/LI	638/LI	639/LI
	640/LI	641/LI	642/LI	643/LI	644/LI	645/LI	682/LI
	690/LI	691/LI	692/LI	693/LI	694/LI	701/LI	703/LI
	713/LI	948/LB*	955/LW	955/LW*	956/PSW	959/LM	975/LM
	980/STM						
R1	11= EQU	392/LW	393/LW	437/LW	438/AND	440/SLS	441/STS
	442/LI	444/STB	552/LW	557/LW	559/LW	564/LW	617/LI
	618/EXU	708/LI	709/EXU	738/LI	742/LH	745/BDR	747/CB
	749/BDR	754/LH	762/LB	765/CB	767/STB	770/LH	773/STH
	807/LB	808/CI	810/AND	811/STB	919/STH	957/LW	959/LM
	961/STCF	962/SLS	963/SLS	968/LW	969/AI	970/STW	971/AI
	972/AND	973/STW	1038/LW	1039/STW	1071/BAL	1129/BAL	1206/B
	1265/LI	1266/AW	1267/LD*	1308/STD*			
R10	20= EQU						
R11	21= EQU	407/BAL	411/BAL	966/BAL			
R12	22= EQU						
R13	23= EQU						
R14	24= EQU	414/LI	1043/LI				
R15	25= EQU						
R2	12= EQU	419/BAL	420/BAL	525/LW	526/AI	527/STW	528/AI
	529/AND	530/STW	554/LW	555/AI	556/AND	558/STS	562/STS
	565/STS	619/LI	621/LW	623/LI	626/LI	742/LH	743/CS
	751/LI	752/LW	754/LH	755/AND	757/CI	762/LB	763/SW
	765/CB	767/STB	770/LH	771/AND	772/SW	773/STH	919/STH
	948/LB	949/SLD	952/CW	1204/LH	1205/CI	1273/LW	1275/LH

R3	1289/AND 13-EQU 756/LW 951/LW 1279/STM	1297/BR 285/CI 761/SLS 952/CW 1317/LI	1298/STW 286/BLE 772/SW 1003/SLS	1316/LW 388/BAL 868/LI 1004/CW	1318/STS 401/LW 869/AW 1039/STW	403/SLS 950/SLS 1274/LH	404/AH 951/LW 1276/STH
R4	14-EQU 805/AND	342/LW 1203/LW	357/LW 1204/LH	424/LW 1270/LW	437/LW	443/SLS	444/STB
R5	15-EQU 1320/STS	415/LI	1270/LW	1272/STS	1273/LW	1298/STW	1318/STS
R6	16-EQU 514/LB* 1150/LW	284/AND 524/STW 1272/STS	405/LW 739/CI 1277/LI	410/LI 743/CS 1279/STM	504/CI 747/CB 1315/LW	506/AW 954/PSW 1316/LW	508/LW 1138/PUSH
R7	17-EQU 353/CI 404/AH 427/AND 508/LW 741/LI 1039/STW	342/LW 355/CI 405/LW 428/CI 509/SLS 872/LB 1137/PUSH	343/CW 357/LW 406/AI 430/CI 514/LB 873/CI 1139/LW	347/SW 358/CI 416/LI 432/CI 515/AND 921/LI 1268/LW	349/AI 360/EXU 417/MTB 434/CI 516/SLS 960/ANLZ 1271/LI	351/INT 399/LW 424/LW 439/BCR 517/AI 963/SLS	351/INT 401/LW 426/AI 445/B 521/LW 964/CLM
R8	18-EQU						
R9	19-EQU						
S:CUIS	207/REF	1216/LW					
S:CUN	167/REF 1203/LW	585/LW 1234/LW	721/LW	814/LW	932/LW	983/LW	992/LW
S:MBSF	201/REF	774/MTW					
S:RTCORE	157/REF	834/AWM	843/AWM				

SBIRTY							
SCCSTRP	173/REF	747/CB					
SCR61	350/BLZ	354/BG	356/BE	423-EQU			
SCR7C	146/REF	937/BANZ					
SEGLD#	290/B	291/B	735-SUA				
SEGLDO	80/REF	1151/OVERTO					
SEGLD1	1140/BGEZ	1145-CI					
SEG30	1149/BNEZ	1158-EQU					
SHIRBCU	1178/BE	1187-EQU					
SHIRNM	175/REF	770/LH	773/STH				
SLAVECODE	176/REF	742/LH	754/LH				
SPDBASE	261-EQU	264/DATA	551/AI				
SPPBASE	159/REF	818/LI					
SR1	160/REF	997/LI					
SR2	18-EQU	393/LW	615/CI	618/EXU*	624/CI	674/CI	709/EXU
SR3	751/LI	752/LW	756/LW	759/CI	763/SW		
SR4	19-EQU	1139/LW	1141/CI	1143/AW	1144/LW	1144/LW*	1145/CI
STKTOTMP	1147/AW	1169/LM*					
	20-EQU						
	21-EQU						

STKTOT10	1005/BANZ	1022=EGU	1048/BANZ				
SVIRSIZ	1025/BNEZ	1029=LI					
SYS2	174/REF	738/LI					
S9S7	1331/BGE	1333=LW					
T:ABORT	560/BIF						
T:ABORTM	58/REF	368/B					
T:ACCTEX	59/REF	850/LI	857/BLZ	887/BNE	894/BG	1020/B	1037/B
T:ASI#	1049/B	1182/B					
T:ASSOCIATE#	133/REF	388/BAL					
T:BLIST#	109/REF	1226/LI					
T:CHTBL#	75/REF	466/LI					
T:CLRERR	99/REF	595/LI	601/LI				
T:COUPL#	77/REF	682/LI					
T:DCLOSE#	468/B	720=EGU					
T:DISASSOCIATE#	111/REF	1099/OVERLAY					
T:DOPEN#	98/REF	599/LI					
T:ERROR	76/REF	467/LI					
T:EXIT	97/REF	597/LI					
	61/REF	367/B					

T:FCP	60/REF	366/B		
T:FDP	70/REF	689/B		
T:FSI#	68/REF	685/B		
T:FVP	112/REF	1224/LI		
T:GBUF	66/REF	681/B		
T:GCP	134/REF	419/BAL		
T:GDDL#	69/REF	688/B		
T:GDP	84/REF	703/LI		
T:GETID	67/REF	684/B		
T:GL	117/SREF	622/BLZ		
T:GVP	64/REF	687/B		
T:IACU	65/REF	680/B		
T:INITJOB	121/REF	510/BAL	966/BAL	1244/BAL
T:LOCK#	118/REF	598/B		
T:MAP#	96/REF	596/LI		
T:MODPRTRT#	95/REF	594/LI		
T:OVER	93/REF	602/LI		
T:OVERLAY	1228/B			
	363/B	582/B	627/B	718/B

TIPAC						
T:PRBCOV	119/REF	898/B				
TIRBUF	142/REF	1188/BAL				
T:RDERLOG#	136/REF	420/BAL				
T:REG	91/REF	592/LI				
T:ISAD	123/REF	837/BAL				
T:SAVEGET#	63/REF	683/B				
T:SELFDESTRUCT	87/REF	464/LI	465/LI			
T:SMP	127/REF	903/BAL				
T:ISSEM	62/REF	686/B				
T:SYS	122/REF	801/LI	845/LI	1040/B		
T:SYSLBAD	600/B	1329=LB				
T:UTSXTS	695/B	1212=EQW				
T:WAIT#	140/REF	1036/BAL				
T:WTERLOG#	82/REF	691/LI				
TEMP	92/REF	593/LI				
TIC	208/REF	910/STW	915/B*			
TMPTOSTK	587/CI	723/CI	934/CI	936/CI		
TQOV1SEG	47/DEF	812/B	817/BAZ	822/BEZ	846/B	848=RES



TQ0V2END	100/REF	626/LI					
TQ0V2SEG	624/CI	637-EQU					
TQUEUE#	101/REF	623/LI					
TRAPEXIT	107/REF	638/LI	639/LI	640/LI	641/LI	642/LI	643/LI
	644/LI						
TRAPFLGB	125/REF	396/B	418/BEZ	452/B	538/B	795/B	987/B
	1094/B	1100/B	1191/B	1219/B	1311/BNEZ	1314/B	
TRAP10	188/REF	1003/SLS	1046/SLS	1288/SCS	1296/SLS		
TRAP28	925/BANZ	932-LW					
TRAP30	965/BCS	967/BCS	989-RES				
TRAP40	939/BAZ	942/BNE	946/BCR	953/BAZ	995-LI		
TRAP40A	935/BAZ	1002-EQU					
TRAP40B	1008/BEZ	1015-LB					
TREEBAD	1010/B	1018-SCS					
TRNC	281-EQU						
TRPFLAGS	132/REF	407/BAL	411/BAL				
TSTACK	187/REF	1273/LW	1298/STW	1320/STS			
	347/SW	392/LW	525/LW	554/LW	792/AW	869/AW	904/LW
	912/MSP	954/PSW	956/PSW	957/LW	960/ANLZ*	968/LW	977/EXU*
	990/PLW	991/PLW	1027/AND	1218/STM*	1266/AW	1279/STM*	1312/LW
TYP	1333/LW						

UBIAPR	116/SREF	619/LI					
UBIASP	172/REF	1148/LB					
UBIDB	170/REF	821/LB					
UFLAGS	171/REF	825/LB					
	5-SET						
UHIFLG	168/REF	586/LH	722/LH	815/LH	820/STH	824/STH	933/LH
	984/LH	986/STH	993/LH	1235/LH			
UHIFLG2	169/REF	827/LH	1204/LH				
USERG0	374/B	384-EQU					
USRENT	186/REF	1270/LW	1272/STS	1318/STS			
UTSPROC	4-SET						
XCONSETUP	139/REF	1087/B					
XFFDF	257-EQU	810/AND					
XFFFE	258-EQU	823/AND					
XFFFF	218/REF	755/AND	771/AND				
XFF00	213/REF	805/AND					
XN2	212/REF	529/AND	556/AND				
XXTRUNC	400/BEZ	402/BEZ	409-EQU				
X1	521/LW						
X1FFFE							

	211/REF	793/AND			
X10	985/BR				
X8	1085/BR				
X80	1285/BR	1294/BR			
YE	210/REF	790/LW			
Y0001	343/CW	438/AND			
Y001	389/LW				
Y002	386/CW				
Y003	217/REF	1303/AND	1304/AND	1322/LW	
Y003E	216/REF	390/LW			
Y004	559/LW	922/CW			
Y008	553/LW	557/LW	875/BR	924/CW	1336/LW
Y01FE	215/REF	1319/LW			
Y08	564/LW				
Y1	563/LW				
Y2	780/LW				
Y4	783/LW	941/CB			
Y8	785/LW				
40SUBS	1011-GEN	1017/LB			

40TRAP

\$

31/DEF

917-EQU

253/EQU  
379/EQU  
454/EQU  
579/EQU  
637/EQU  
775/EQU  
885/BEZ  
1070/EQU  
1194/EQU  
1286/EQU

283/EQU  
384/EQU  
461/EQU  
584/EQU  
647/EQU  
776/EQU  
901/EQU  
1098/EQU  
1207/EQU  
1295/EQU

288/EQU  
398/EQU  
469/EQU  
591/EQU  
706/EQU  
777/EQU  
917/EQU  
1128/EQU  
1212/EQU

298/EQU  
409/EQU  
471/EQU  
603/EQU  
715/B  
782/EQU  
1002/EQU  
1142/BANZ  
1221/EQU

361/EQU  
413/EQU  
480/EQU  
614/EQU  
720/EQU  
789/EQU  
1022/EQU  
1146/BANZ  
1225/B

364/EQU  
423/EQU  
540/EQU  
625/BL  
737/EQU  
841/BG  
1042/EQU  
1158/EQU  
1230/EQU

377/EQU  
425/EQU  
571/EQU  
629/EQU  
749/BDR  
874/BL  
1044/EQU  
1187/EQU  
1247/BLE

H01 13:37 SEP 08, 1958

1  
2  
3 00000001  
4 00000001  
5 00000001  
6 00000001  
7

\*M\* ALTCP PROCESSING OF CAL1,3 • CAL1,9 AND TRAP HANDLING  
PCC 0  
MONPR0C SET 1  
UTSPR0C SET 1  
UFLAGS SET 1  
BITS SET 1  
SYSTEM UTS

H01 13:37 SEP 08, 1978

9  
10 00000000  
11 00000001  
12 00000002  
13 00000003  
14 00000004  
15 00000005  
16 00000006  
17 00000007  
18 00000008  
19 00000009  
20 0000000A  
21 0000000B  
22 0000000C  
23 0000000D  
24 0000000E  
25 0000000F

\*  
R0 EQU  
R1 EQU  
R2 EQU  
R3 EQU  
R4 EQU  
R5 EQU  
R6 EQU  
R7 EQU  
R8, SR1 EQU  
R9, SR2 EQU  
R10, SR3 EQU  
R11, SR4 EQU  
R12, D1 EQU  
R13, D2 EQU  
R14, D3 EQU  
R15, D4 EQU

SYMBOLIC REGISTER DEFINITIONS.

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27 *
28 * DEFS
29 *
30 DEF ALTCP MODULE DEF FOR PATCHING
31 DEF 4OTRAP ENTRY FOR PROCESSING TRAPS
32 **, X'40'-X'46'
33 DEF CALCK ENTRY TO PROCESS CAL1,3-CAL19
34 DEF CALBAD ENTRY TO PROCESS ILLEGAL CAL TRAPS
35 **, X'49'-X'4B' & UNDEFINED CAL1

37 DEF OUT RTN TO RETURN CCS AS SET IN R12
38 DEF CC1SET RTN TO RETURN WITH CC1 TO BE SET
39 DEF CCORST RTN TO RETURN WITH CC1&2 RESET
40 DEF CC1RST RTN TO RETURN WITH CC1 RESET
41 DEF CC2SET RTN TO RETURN WITH CC2 SET
42 DEF MSTRAPXIT EXIT RTN FROM PROCESSING M:STRAP CAL
43 DEF CKLIMIT RTN TO RETURN MAX PROTECTION ON A
44 **, RANGE OF MEMORY
45 DEF RTCHK RTN TO CHECK IF RT USER HAS
46 **, LOCKED SELF IN CORE
47 DEF TMPTESTK RTN TO MOVE USER'S TEMP STACK
48 **, TO TSTACK
49 DEF MTRTNO RTN MERGER POINT OF M:INTRTN
50 **, PROCESSING WITH STD M:TRTN
51 DEF RTERR ABORT CODE FOR RT USER ISSUING
52 **, RESTRICTED CAL AFTER LOCKING IN CORE

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REFS

SERVICE ROUTINES

REF	T:ABORT	ENTRY PT TO PROCESS M:ABORT CAL
REF	T:ABORTM	EXIT FOR MONITOR DETECTED ABORT
REF	T:EXIT	ENTRY PT TO PROCESS M:EXIT CAL
REF	T:ERROR	ENTRY PT TO PROCESS M:ERROR CAL
REF	T:SMP	PROCESS M:SMPRT CAL
REF	T:ISAD	PROCESS M:ICVM CAL
REF	T:IGL	PROCESS M:IGL CAL
REF	T:GVP	PROCESS M:GVP CAL
REF	T:FVP	PROCESS M:FVP CAL
REF	T:IGDP	PROCESS M:IGP CAL
REF	T:IFDR	PROCESS M:IFP CAL
REF	T:IGCP	PROCESS M:IGCP CAL
REF	T:IFCP	PROCESS M:IFCP CAL
REF	MULSEG	MULOV OVERLAY SEGMENT NUMBER
REF	LDEV#	ENTRY PT TO PROCESS LDEV CAL
REF	CCL0SE#	ENTRY PT TO PROCESS SUPERCL0SE CAL
REF	MISOVSEG	MISOV OVERLAY SEGMENT NUMBER
REF	T:ASSOCIATE#	ENTRY PT TO PROCESS ASSOC CAL
REF	T:DISASSOCIATE#	ENTRY PT TO PROCESS DISASSOC CAL
REF	T:ICHTBL#	ENTRY PT TO PROCESS M:ICT CAL
REF	MSTRAP#	ENTRY PT TO PROCESS M:STRAP CAL
REF	MTIME#	ENTRY PT TO PROCESS M:TIME CAL
REF	SEGLD#	ENTRY PT TO PROCESS M:SEGLD CAL
REF	MINT#	ENTRY PT TO PROCESS M:INT CAL
REF	T:WAIT#	ENTRY PT TO PROCESS M:WAIT CAL
REF	MXCON#	ENTRY PT TO PROCESS M:IXCON CAL
REF	T:IGDDL#	ENTRY PT TO PROCESS M:IGDDL CAL
REF	MSTIMER#	ENTRY PT TO PROCESS M:STIMER CAL
REF	MTTIMER#	ENTRY PT TO PROCESS M:TTIMER CAL
REF	T:SAVEGET#	ENTRY PT TO PROCESS M:SAVE/GET CALS
REF	DEBUGSEG	DEBUG OVERLAY SEGMENT NUMBER
REF	LDLNKSEG	LDLNK OVERLAY SEGMENT NUMBER
REF	RMAOVSEG	RMAOV OVERLAY SEGMENT NUMBER



91		REF	T:RDRLOG#	ENTRY PT TO PROCESS READ ERRLOG CAL
92		REF	T:WTRLOG#	ENTRY PT TO PROCESS WRITE ERRLOG CAL
93		REF	T:MDDPRTRY#	ENTRY PT TO PROCESS M:DMDD,MIDPART
94	**			MIDRET CALS
95		REF	T:MAP#	ENTRY PT TO PROCESS M:MAP CAL
96		REF	T:LOCK#	ENTRY PT TO PROCESS M:LOCK CAL
97		REF	T:IDOPEN#	ENTRY PT TO PROCESS DIAG. OPEN
98		REF	T:IDCLOSE#	ENTRY PT TO PROCESS DIAG. CLOSE
99		REF	T:BLIST#	ENTRY PT TO PROCESS M:SI0,M:LIST CAL
100		REF	TQBVS1SEG	TP-QMGR OVERLAY SEGMENT NUMBER
101		REF	TQBVS2SEG	TP-CNM OVERLAY SEGMENT NUMBER
102		REF	CNMPROC0#	ENTRY PT TO PROCESS M:GETLINE CAL
103		REF	CNMPROC1#	ENTRY PT TO PROCESS M:RLSLINE CAL
104		REF	CNMPROC2#	ENTRY PT TO PROCESS M:BUFSTAT CAL
105		REF	CNMPROC3#	ENTRY PT TO PROCESS M:PURGE CAL
106		REF	CNMPROC4#	ENTRY PT TO PROCESS M:DFLST CAL
107		REF	TQUEUE#	ENTRY PT TO PROCESS M:QUEUE CAL
108		REF	ECBCHECK	ENTRY PT TO PROCESS M:CHECKECB CAL
109		REF	T:ASI#	ENTRY POINT FOR ASSOCIATE.
110	*			SUSPENDED IMAGE CAL.
111		REF	T:COUPL#	ENTRY POINT FOR M:COUPLE,DECOUPLE
112		REF	T:FSI#	ENTRY POINT FOR FIND SUSPENDED
113	*			IMAGE CAL.
114		REF	LDLNK#	ENTRY POINT FOR M:LINK,M:LDTRC
116		SREF	TTP	A NON ZERO VALUE IN TP SYSTEMS
117		SREF	T:GETID	ROUTINE TO GET UNIQUE ID FOR TP
118		REF	T:INITJOB	ROUTINE TO PROCESS INITIATE GJOB CAL
119		REF	T:PAC	ROUTINE TO LOAD AC REGS FOR SPECIAL
120	**			SHARED PROCESSORS
121		REF	T:IIACU	RTN TO VALIDATE ACCESS PROTECTION
122		REF	T:ISSEM	EXIT RETURN TO SCHEDULE USER
123		REF	T:IREG	EXIT TO REPORT EVENT (E:AP) FOR CORN
124	**			LIBRARY AND BLOCK USER
125		REF	TRAPEXIT	EXIT TO SCHED AT END OF CAL PROCESS
126	**			TO CAUSE PSD TO BE BUMPED BY 1

127		REF	TISELFDSTRUCT	FOR ZAPPING OVERLAY
128		SREF	RTALTCP	ENTRY FOR PROCESSING REAL TIME CALS
129	*,*			(CAL1,5 TYPES)
130		SREF	RTINTRTN	ENTRY TO PROCESS M;INTRTN CAL
131	*,*			(CAL1,9 REAL TIME CALS)
132		REF	TRNC	ENTRY PT TO PROCESS TRUNC CALS
133		REF	T:ACCTEX	RTN TO ACCUMULATE PROCESSING TIME
134		REF	T:IGBUF	ROUTINE TO GET SPARE BUFFER PAGE AND
135	*,*			MAP INTO SPECIFIED WINDOW PAGE
136		REF	T:RBUF	ROUTINE TO RELEASE SPARE BUFFER
137	*,*			PAGE AND RETURN TO FREE BUFFER POOL
138	*,*			OR MONITOR
139		REF	XCONSETUP	EXIT TO HONOR EXIT CONTROL ADDRESS
140		REF	TIUTSXTS	RTN TO COPY TSTACK
141	*,*			TO USER'S TEMP STACK
142		REF	T:PROCOV	RTN TO LOAD SHARED PROCESSOR OVERLA
143		REF	CHKPROT	RTN TO CHECK ACCESS PROTECT ON PG
144		REF	DELTA00	EXIT TO GO TO DELTA
145		REF	ABORT	SUA 7E,XX (XX IN R6)
146		REF	SCR61	SUA 61,XX (XX IN R6)

148	*			
149	*	REFS		
150	*		GENERAL DATA	
151	*			
152		REF	QUEUE	ADDRESS OF ENTRY TO IQQ WITH DCB
153	*,*			AND NO END ACTION
154		REF	QUEUE1	ADDRESS OF ENTRY TO IQQ WITH DCB
155	*,*			AND END ACTION
156		REF	NEWQ	ADDRESS OF ENTRY TO IQQ WITH NO DCB
157		REF	SIRTCORE	TOTAL # LOCK IN CORE PAGES
158	*,*			AS RESULT OF MIHOLD CALS
159		REF	SPDBASE	SPECIAL SHARED PROC DATA BIAS

Line	Label	Symbol	Description	Page
160	REF	SPPBASE	SPECIAL SHARED PROC PROCEDURE BIAS	26
161	REF	PINAME	PROCESSOR NAME TABLE	
162	REF	PBILNK	PROCESSOR # OF NEXT OVERLAY	
163	REF	PBILCT	# RT USERS ASSOC WITH PROC	
164	**		THAT ARE LOCKED IN CORE	
165	REF	PBIPSZ	PROC PURE PROCEDURE SIZE IN PGS	
166	REF	PBIUC	#USERS IN CORE ASSOC WITH PROCESSOR	
167	REF	SICUN	CURRENT USER	
168	REF	UHIFLG	USER FLAGS	
169	REF	UHIFLG2	MORE USER FLAGS	
170	REF	UBIASP	PROC # OF SPECIAL SHARED PROCESSOR	
171	REF	UBIDB	PROC # OF DEBUGGER ASSOC WITH USER	
172	REF	UBIAPR	PROC # OF PROC ASSOC WITH USER	
173	REF	SBIRTY	DCT# ENTRY FOR RAT TABLES	
174	REF	SVIRSIZ	LENGTH OF RAT TABLES	
175	REF	SHIRBCU	BATCH CURRENT ALLOCATED RATS	
176	REF	SHIRNM	RESOURCE NAME TABLE	
177	REF	JIJIT	THE JIT	
178	REF	JBIPRIV	PRIVILEGE LEVEL OF USER (BITS0-7)	
179	REF	JBIMAX	MAX # OF RESOURCES	
180	REF	JBICUR	CURRENTLY ALLOCATED RESOURCES	
181	REF	JIBASE	TEMP STORAGE AREA	
182	REF	J:PLL	PG# = LOWER LIMIT OF PURE PROCEDURE	
183	REF	JITCB	TASK CONTROL BLOCK	
184	REF	JIUSENT	ADDRESS OF USER TRAP CONTROL ROUTINE	
185	**		(BITS 15-31) FLAGS IN BITS 1-7	
186	REF	USRENT	DISPLACEMENT INTO JIT FOR JIUSENT	
187	REF	TRPFLAGS	BITS 1-7 OF JIUSENT	
188	REF	TRAPFLGB	BIT OF TRPFLAGS FROM RIGHT	
189	REF	J:EXTENT	ADDRESS OF USER EXIT CONTROL ROUTINE	
190	REF	JIALB	LAST BRANCH ADDRESS (560 ONLY)	
191	REF	JBISTEPCG	STEP CC FOR CURRENT JOB STEP	
192	REF	JBFBFP	FILE MGMT FREE BUFFER POOL HEAD	
193	REF	JIDCBLINK	DCB NAME TABLE	
194	REF	MPPB	BITS 16-31 OUTPUT	
195	**		TEMP TRAP #, TRAP CCS	
196	REF	J:RNST	RUN STATUS FOR USER	

197	REF	JIABC	BITS 0-7 I/O ABORT CODE
198	REF	JITELFLGS	FLAGS USED BY TEL AND CCI
199	REF	ERG	I/O ERROR OVERRIDE ADDRESS
200	REF	MIXX	ADDRESS OF MIXX DCB
201	REF	S:MBSF	START MBS FLAG
202	REF	FIAP	ASSOCIATE PROCESSOR EVENT
203	REF		( FOR CORE LIBRARY )
204	REF	RTICBHDR	PTR TO HEAD OF AVAILABLE ICBS
205	REF	CIETM	EXECUTION TIME MULTIPLIER
206	REF	CIRT90	90 X RESPONSE TIME VALUE
207	REF	S:CUIS	* CURRENT USERS IN SYSTEM
208	REF	TEMP	TEMP CELL
209	REF	NB31T00	MASK
210	REF	YE	MASK
211	REF	X1FFFE	MASK
212	REF	XN2	MASK
213	REF	XFF00	MASK
214	REF	FF3FFFFF	MASK
215	REF	Y01FE	MASK
216	REF	Y003E	MASK
217	REF	Y003	MASK
218	REF	XFFFF	MASK

220

\*P\* NAME: ALTCP

222

\*P\* PURPOSE:

223

\*P\* TO PROCESS CAL1,3 TO CAL1,9 REQUESTS  
 \*P\* TRANSFERRING CONTROL TO THE APPROPRIATE SERVICE  
 \*P\* MODULE

224

225

227

228

\*P\* TO PROCESS TRAPS X'40'-X'46', ILLEGAL CAL  
 \*P\* TRAPS X'49'-X'4B' AND UNDEFINED CAL1 TRAPS

230

\*P\* DESCRIPTION:

231

\*P\* THERE ARE TWO LOGICALLY DISTINCT FUNCTIONS CONTAINED  
 \*P\* WITHIN THIS MODULE

232

\*P\* 1) THE ALTERNATE CAL1 PROCESSING ENTERED AT CALCK  
 \*P\* WHICH PROCESSES THE CAL1,3 TO CAL1,9 REQUESTS  
 \*P\* AND DISPATCHES THEM TO THE APPROPRIATE MODULE

233

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239

\*P\* 2) THE HANDLING OF TRAPS OF WHICH THERE ARE TWO MAIN  
 \*P\* ENTRIES: 40TRAP FOR HANDLING TRAPS X'40'-X'46'  
 \*P\* AND CALBAD FOR HANDLING ILLEGAL CALS X'49'-X'4B'  
 \*P\* AND UNDEFINED CAL1

241

\*P\* THIS MODULE ALSO CONTAINS A NUMBER OF ROUTINES THAT  
 \*P\* ARE CALLED FROM MULTIPLE PLACES IN THE MONITOR.  
 \*P\* SUCH ROUTINES INCLUDE THE SET OF CAL EXIT ROUTINES  
 \*P\* THAT EFFECT THE SETTING OF CONDITION CODES UPON RETURN  
 \*P\* TO THE USER AT THE CAL\*1. OTHER ROUTINES ARE  
 \*P\* TMPTOSTK TO MOVE THE USER'S TEMP STACK TO THE TSTACK  
 \*P\* AND CKLIMIT TO RETURN THE MAXIMUM PROTECTION ON  
 \*P\* A RANGE OF MEMORY.

242

243

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250

\*P\* REFERENCE:

251

\*P\* SEE REPORTS F AND D

253				ALTCP	EQU	*	MODULE START
254				*			
255				*			
256				*			
257		00000006	S	XFFDF	EQU	NB31T80+6	
258		00000001	S	XFFFE	EQU	NB31T80+1	
259				*		REAL-TIME DATA (CAL1,5)	
260				*			
261		00000007		SLAVECODE	EQU	7	M:SLAVE FPT CODE
262		00000008		MASTERCODE	EQU	8	M:MASTER FPT CODE
263					BOUND	8	
264	01	00000	00000007	A	MSCODES	DATA	SLAVECODE,MASTERCODE
	01	00001	00000008	A			
265		00010003			OPCODES	EQU	X'10003'
266				*			MASK OF LEGAL EXU OPCODES
267		00000028			EXUCODE	EQU	X'28'
268				*			M:EXU FPT CODE
269	01	00002	010000B9	A	EXUIERR1	DATA	X'010000B9'
270	01	00003	040000B9	A	EXUIERR2	DATA	X'040000B9'
271	01	00004	050000B9	A	EXUIERR3	DATA	X'050000B9'
272				*			
273				*			
274	01	00005	030000B8	A	RTERR	DATA	X'030000B8'
275				*			ABORT CODE; RESTRICTED MONITOR SERV
276		00000800			FLGILIC	EQU	X'800'
277	01	00006	00200000	A	OPTBL	DATA	X'00200000'
278	01	00007	00280000	A		DATA	X'00280000'
279	01	00008	002800C0	A		DATA	X'002800C0'
280	01	00009	00380040	A		DATA	X'00380040'
281		00000001			TREEBAD	EQU	1







H01 13137 SEP 08, 175

357 01 00021 32400007 A  
 358 01 00022 2170000D A  
 359 01 00023 68100027  
 360 01 00024 670E0026  
 361 01 00025  
 362 01 00025 22200000 N  
 363 01 00026 68000000 X  
 364 01 00027  
 365 01 00027 68000233  
 366 01 00028 48000000 X  
 367 01 00029 68000000 X  
 368 01 0002A 68000000 X  
 369 01 0002B 22000000 N  
 370 01 0002C 6800015C  
 371 01 0002D 68000119  
 372 01 0002E 68000233  
 373 01 0002F 68000233  
 374 01 00030 68000036  
 375 01 00031 68000233  
 376 01 00032 68000042  
 377 000000C

M8N8VLY  
 C19TV  
 NC19S  
 EQU  
 R7  
 NC19S+1  
 C19TV  
 C19TV=1,R7  
 \$  
 MIS8VSEG  
 T18VERLAY  
 \$  
 BADCAL  
 T1EXIT  
 T1ERROR  
 T1ABORT  
 MSTRAP#  
 MTRTN  
 CALMUL2  
 BADCAL  
 BADCAL  
 USERG8  
 BADCAL  
 MSTRUNC  
 \$=C19TV

SET UP FOR MTRTN

M1EXIT  
M1ERROR  
M1ABORT

C88P SUPER CLOSE

M1CLEAT

M1TERM

M1EXEC

M1INTRTN ILLEGAL WITH SCC BIT UNSET

M1STRUNC

379 01 00033  
 380 01 00033 32000000 X  
 381 01 00034 69100233  
 382 01 00035 68000000 X

INTRTN  
 EQU  
 LW,0  
 BLZ  
 B  
 \$  
 RTICBHDR  
 BADCAL  
 RTINTRTN

M1INTRTN (CAL1,9 XIA)  
 IS THIS A REAL TIME SYSTEM  
 NO  
 M1INTRTN ROUTINE IN RTR88T

384 01 00036  
 385 01 00036 32C00000 X  
 386 01 00037 31C00016 N  
 387 01 00038 68400233  
 388 01 00039 6A300000 X  
 389 01 0003A 32C00015 N  
 390 01 0003B 32D00000 X  
 391 01 0003C 47C00000 X

USERG8  
 EQU  
 LW,D1  
 CW,D1  
 BAZ  
 BAL,R3  
 LW,D1  
 LW,D2  
 STS,D1  
 \$  
 J1RNST  
 Y002  
 BADCAL  
 T1ACCTEX  
 Y001  
 Y003E  
 J1RNST

M1EXEC (CAL1,9 9)

MUST BE A SHARED PROCESSOR,  
 ==> NOT. ABORT.  
 ACCUM PROC TIME, NEW QUANTUM.

Y001 MEANS USER NOT PROCESSOR.

392 01 0003D 32100000 X  
 393 01 0003E 32C3FFF9 A  
 394 01 0003F 22D1FFFF A  
 395 01 00040 47C00000 X  
 396 01 00041 68000000 X

LW,R1 TSTACK  
 LW,D1 SR1=15,R1  
 LI,D2 X'1FFFF'  
 STS,D1 J:TCB  
 B TRAPEXIT

SR1 FROM USER IS  
 A NEW  
 TCB ADDRESS.  
 ---> ALL DONE NOW.

398 01 00042 32700000 X  
 399 01 00042 6830004C X  
 400 01 00043 323E0001 A  
 401 01 00044 6830004C A  
 402 01 00045 25300076 A  
 403 01 00046 50700003 A  
 404 01 00047 326E0002 A  
 405 01 00048 20700002 A  
 406 01 00049 6AB00000 X  
 407 01 0004A 68000044 X  
 408 01 0004B 0004C  
 409 01 0004C 22600000 N  
 410 01 0004D 6AB00000 X  
 411 01 0004E 22E09400 A  
 412 01 0004E 22500000 A  
 413 01 0004F 22700000 N  
 414 01 00050 730E0000 X  
 415 01 00051 68300000 X  
 416 01 00052 6A200000 X  
 417 01 00053 6A200000 X  
 418 01 00054 6800004E X  
 419 01 00055

MSTRUNC EQU \$  
 LW,R7 J:DCBLINK  
 BEZ XXTRUNC  
 DCBLOOP LW,R3 1,R7  
 BEZ XXTRUNC  
 SLS,R3 =10  
 AH,R7 R3  
 LW,R6 2,R7  
 AI,R7 2  
 BAL,R11 TRNC  
 B DCBLOOP  
 XXTRUNC EQU \$  
 LI,R6 MIXX  
 BAL,R11 TRNC  
 \* FBL00P EQU \$  
 LI,R14 BUFF1  
 LI,R5 0  
 LI,R7 JBF0FP  
 MTB,0 JIJIT,R7  
 BEZ TRAPEXIT  
 BAL,R2 TIGBUF  
 BAL,R2 TIRBUF  
 B FBL00P

M:STRUNC (CAL1,9 X'8'  
 ---> NO DCBS.  
 GET DCBNAME.  
 ---> NO MORE DCBS.  
 # NAMEWORDS IN R3(0-15)  
 GET PAST NAME.  
 R6 = DCB ADDRESS.  
 M:TRUNC THE DCB.  
 REPEAT.  
 M:TRUNC MIXX:  
 NOW DISCARD SPARE FPOOL BUFFERS.  
 COPY THEM TO HERE BEFORE DELETING.  
 FLAG TO TELL TIRBUF TO FREE PP.  
 ANY BUFFERS IN FREEPOOL...  
 ---> NO. DONE.  
 MAP THE FREE BUFFER, SO WE CAN  
 RELEASE IT!  
 ---> REPEAT.

423 01 00056 32700004 A  
 424 01 00057 207FFFFFFF A  
 425 01 00057

SCCSTRP EQU \$  
 LW,R7 R4  
 CAL19M0D EQU \$  
 AI,R7 =1

RESTORE R7 AS OF BEF.MANIPLTN  
 GET BACK SCC & EXIT TYPE

H01 13137 SEP 08, '75

427 01 00058 48700008 N  
 428 01 00059 2170000A A  
 429 01 0005A 68300033  
 430 01 0005B 21700000 A  
 431 01 0005C 68300233  
 432 01 0005D 21700005 A  
 433 01 0005E 6830015C  
 434 01 0005F 21700003 A  
 435 01 00060 69200233  
 436  
 437 01 00061 32100004 A  
 438 01 00062 48100011 N  
 439 01 00063 682E0027  
 440 01 00064 25100008 A  
 441 01 00065 47100000 X  
 442 01 00066 22100001 A  
 443 01 00067 25400078 A  
 444 01 00068 75420000 X  
 445 01 00069 680E0027

AND,R7 M8  
 CI,R7 10  
 BE INTRTN  
 CI,R7 0  
 BE BADCAL  
 CI,R7 5  
 BE MTRTN  
 CI,R7 3  
 BG BADCAL  
 LW,R1 R4  
 AND,R1 Y0001  
 BCR,2 C19TV,R7  
 SLS,R1 8  
 STS,R1 J:EXTENT  
 LI,R1 1  
 SLS,R4 \*8  
 STB,R4 JBISTEPCC,R1  
 B C19TV,R7

EXAMINE TYPE  
 IS THIS AN M:INTRTN (REAL TIME)  
 YES

HAVE TO TAKE OF M:TRTN

NO MOD. AS SUCH ON M:STRAP  
 AND SUPERCLOSE AS YET

\* NOTE: SET STCC IS ONLY VALID FOR M:EXIT, M:ERR, M:XXX

BIT 15 NOT SET, GO EXIT

STCC BIT SET IN JIT

SET STCC CODE IN JIT  
 NOW GO EXIT

448	01	0006A	21800006	A	CAL13	CI,8	6
449	01	0006B	68100233			BGE	BADCAL
450	01	0006C	32000008	A		LW,0	8
451	01	0006D	22200000	N		OVERLAY	DEBUGSEG
		01	0006E	6AB00000	X		
452	01	0006F	68000000	X		B	TRAPEXIT

H01	13137	SEP 08, 1975				
454		01 00070	CAL14	EQU	*	
455	01	00070		C1,8	NC14S	
456	01	00071		BGE	BADCAL	
457			*			
458	01	00072		LI,1	C14TV	
459	01	00073		EXU	*8,1	
460	01	00074		B	MONOVLY	
461		01 00075	C14TV	EQU	*	
462	01	00075		B	BADCAL	0
463	01	00076		B	BADCAL	1
464	01	00077		LI,RO	T:SAVEGET#	2
465	01	00078		LI,RO	T:SAVEGET#	3
466	01	00079		LI,RO	T:ASSOCIATE#	ASSOC LIB/DEBUG
467	01	0007A		LI,RO	T:DISASSOCIATE#	DISASSOC LIB/DEBUG
468	01	0007B		B	T:CLRERR	8,1061
469		0000007	NC14S	EQU	\$=C14TV	

```

471          01 0007C
472 01 0007C 21800028 A
473 01 0007D 48300083
474 01 0007E 19800000
475 01 0007F 689000A8
476 01 00080 32000000 X
477 01 00081 69100233
478 01 00082 68000000 X
479
480          01 00083
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498 01 00083 220000C0 A
499 01 00084 71000000 X
500 01 00085 68200088
501 01 00086 32E00002
502 01 00087 68000234
503
504 01 00088 2161FFFF0 A
505 01 00089 6940008C
506 01 0008A 30600000 X
507 01 0008B 68000092
    
```

```

CAL15 EQU *
CI,8 EXUCODE IS THIS M1EXU
BE MEXU YES
CLM,8 MSCODES M1MASTER/M1SLAVE
BCR,9 MSTRSLV YES
LW,0 RTICBHDR IS THIS A REAL-TIME SYSTEM
BLZ BADCAL NO
B RTALTCP CAL15 HANDLER IN RTR00T MODULE

*
MEXU EQU *
* M1EXU CAL1,5 RECEIVER
*
* EXECUTE THE FOLLOWING PRIVILEGED INSTRUCTIONS:
*
* S10 = X'4C'
* T10 = X'4D'
* TDV = X'4E'
* H10 = X'4F'
* RD = X'6C'
* WD = X'6D'
*
* CONDITION CODES RETURNED TO USER ARE THOSE OF THE EXECUTED
* INSTRUCTION, HENCE, ANY ABNORMAL CONDITION IS REPORTED AS
* AN ABORT (CODE = B9) SUBCODES, AS INDICATED)
*
* R6 = ADDRESS OF INSTRUCTION TO BE EXECUTED
* R11 CONTAINS RETURN ADDRESS (TRAPEXIT)
*
LI,R0 X'1C0'
CB,R0 JBI PRIV PRIVILEGE OK
BLE EXUOK YES
LW,14 EXUERR1 NO; ABORT USER (B9/01)
B CALBAD

*
EXUOK CI,R6 X'1FFFF0' CHECK FOR INSTRUCTION IN REGISTER
BANZ EXU15 NO
AW,R6 JIBASE CONVERT TO STACK ADR.
B EXU17 CONTINUE
    
```

```

508 01 0008C 32700006 A
509 01 0008D 25700077 A
510 01 0008E 6AB00000 X
511 01 0008F 68200092
512 01 00090 32E00003
513 01 00091 68000234
514 01 00092 F2700006 A
515 01 00093 48700007 N
516 01 00094 2570007F A
517 01 00095 207FFFDA A
518 01 00096 68100099
519 01 00097 32E00004
520 01 00098 68000234
521 01 00099 329E0001 N
522 01 0009A 21910003 A
523 01 0009B 68400097
524 01 0009C 35600001 N
525 01 0009D 32200000 X
526 01 0009E 202FFFF1 A
527 01 0009F 35200003 N
528 01 000A0 202FFFFE A
529 01 000A1 4B200000 X
530 01 000A2 35200002 N
531 01 000A3 02200000 A
532 01 000A4 AA000003 N
533 01 000A5 F0300002 N
534 01 000A6 F7000001 N
535 01 000A7 F4000002 N
536 01 000A8 02200000 A
537 01 000A9 AB000003 N
538 01 000AA 68000000 X
539
540 01 000AB
541
542
543
544
    
```

```

EXU15 LW,R7 R6
      SLS,R7 +9
      BAL,11 T:IACU
      BCR,2 EXU17
      LW,14 EXUIERR2
      B CALBAD
EXU17 LB,R7 +R6
      AND,R7 M7
      SLS,R7 +1
      AI,R7 +X'261
      BGEZ EXU19
EXU18 LW,14 EXUIERR3
      B CALBAD
EXU19 LW,9 X1,R7
      CI,9 0PC0DES
      BAZ EXU18
      STW,R6 J:BASE+1
      LW,R2 TSTACK
      AI,R2 +15
      STW,R2 J:BASE+3
      AI,R2 +2
      AND,R2 XN2
      STW,R2 J:BASE+2
      LCI 0
      LM,0 +J:BASE+3
      LCP +J:BASE+2
      EXU,0 +J:BASE+1
      STCF +J:BASE+2
      LCI 0
      STM,0 +J:BASE+3
      B TRAPEXIT
    
```

```

GET INSTRUCTION ADR.
CONVERT TO PAGE ADR.
CHECK PROTECTION
OO OR O1
10 OR 11; ABORT USER (B9/04)

GET 0PCODE
SCRUB INDIRECT BIT
DIVIDE BY TWO
SUBTRACT BASE VALUE
CHECK LEGAL 0PC0DES
BAD 0PC0DE; ABORT USER (B9/05)

CHECK FOR LEGAL 0PC0DES
MASK OF LEGAL 0PC0DES
ILLEGAL 0PC0DE
SAVE INSTRUCTION LOC

POINT TO REGISTER 0 IN STACK
SAVE POINTER TO REGISTERS
POINT TO PSD
      IN STACK

SAVE POINTER
RESTORE USER REGISTERS
FROM STACK ENVIRONMENT
CC'IS TOO
*****
SAVE CC'IS
PUT REGS BACK IN USER ENVIRONMENT

RETURN TO USER VIA TRAPEXIT
    
```

```

*
MSTRSLV EQU $
*
* PLACE USER PROGRAM IN MASTER (PROTECTED ON SIGMA9/X560) MODE
* OR RETURN TO SLAVE MODE
*
    
```

```

545
546
547
548 01 000AB 220000C0 A
549 01 000AC 71000000 X
550 01 000AD 69200155
551 01 000AE 208FFFF9 A
552 01 000AF 32100008 A
553 01 000B0 32900018 N
554 01 000B1 32200000 X
555 01 000B2 202FFFFE A
556 01 000B3 48200000 X
557 01 000B4 32820018 N
558 01 000B5 47840000 A
559 01 000B6 32820017 N
560 01 000B7 70200000 X
      01 000B8 69C000BA
561 01 000B9 25800179 A
562 01 000BA 47840001 A
563 01 000BB 3290001D N
564 01 000BC 3282001C N
565 01 000BD 47840001 A
566 01 000BE 6800014F
    
```

\*  
\*  
\*

R8 = FPT CODE  
R11 CONTAINS RETURN ADDRESS (TRAPEXIT)

```

LI,R0 X'CO' SECURITY CHECK
CB,R0 JB:PRIV
BG CC1SET NA
AI,8 *SLAVECODE R8#0 IF SLAVE,1 IF MASTER
LW,R1 8 MOVE TO INDEX REGISTER
LW,9 Y008 MASK FOR SLAVE BIT
LW,R2 TSTACK FORM POINTER TO PSD
AI,R2 *17
AND,R2 XN2 POINT TO PSW1
LW,8 Y008,R1 SET SLAVE BIT IF M,SLAVE
STS,8 0,R2 MERGE IN PSD
LW,8 Y004,R1 SET MODE ALTERED BIT(MASTER PROTECT)
BIF,S9S7 MS1 X560 CHECK REQUIRED FOR MA BIT

SLD,8 *7 SHIFT IF X560
STS,8 1,R2 MERGE INTO PSD
LW,9 Y1 SET WRITE KEY
LW,8 Y08,R1
STS,8 1,R2 INTO PSD
B CCORST RETURN
    
```

MS1



```

568
569
570
571      01 000BF
572 01 000BF 21800008 A
573 01 000C0 68100233
574
575 01 000C1 208000CD
576 01 000C2 221000A0 A
577 01 000C3 71100000 X
578 01 000C4 692000C8
579      01 000C5
580 01 000C5 67000008 A
581 01 000C6 22200000 N
582 01 000C7 68000000 X
583
584      01 000C8
585 01 000C8 32100000 X
586 01 000C9 52120000 X
587 01 000CA 21100080 A
588 01 000CB 694000C5
589 01 000CC 68000155
590
591      01 000CD
592 01 000CD 22000000 N
593 01 000CE 22000000 N
594 01 000CF 22000000 N
595 01 000D0 22000000 N
596 01 000D1 22000000 N
597 01 000D2 22000000 N
598 01 000D3 68000000 X
599 01 000D4 22000000 N
600 01 000D5 680002D7
601 01 000D6 22000000 N
602 01 000D7 22000000 N
603      00000008
    
```

```

*
* CAL1,6 UTS RELIABILITY CALS
*
CAL16 EQU $
CI,8 NC16S CHECK IF LEGAL CAL1,6
BGE BADCAL BRANCH IF NO
*
AI,8 C16TV
LI,1 X'AO' DIAGNOSTIC & RELIABILITY PRIVILEGE
CB,1 JBIPRIV CHECK USERS PRIVILEGE LEVEL
BG CAL16Y
CAL16X EQU $
EXU *8
LI,2 RMAOVSEG
B TIOVERLAY
*
CAL16Y EQU $
LW,1 S,CUN
LH,1 UHIFLG,1
CI,1 TIC
BANZ CAL16X
B CC1SET SET CC1 FOR ERROR
*
C16TV EQU $
LI,RO T:ORDERLOG# 0 READ ERROR LOG
LI,RO T:WATERLOG# 1 WRITE ERROR LOG
LI,0 T:MAP# 2 CONVERT ADDRESS, MIMAP
LI,0 T:BLIST# 3 MISIO, SAME ENTRY AS MIBLIST
LI,0 T:LOCK# 4 M:LOCK
LI,0 T:DBPEN# 5 DIAGNOSTIC OPEN
B T:INITJOB 6 INITIATE A GHOST JOB
LI,0 T:DCLOSE# 7 DIAGNOSTIC CLOSE
B T:SYS 8
LI,0 T:BLIST# 9 BUILD COMMAND LIST
LI,RO T:IMBDRTRT# 10 (A) PROCESS M:DMOD#,M:DPART,M:DRE
NC16S EQU $=C16TV
    
```

```

605
606
607
608
609
610
611
612
613
614      01 000D8
615 01 000D8      2180000E A
616 01 000D9      68100233
617 01 000DA      221000E5
618 01 000DB      F7020008 A
619 01 000DC      22200000 N
620 01 000DD      68300233
621 01 000DE      32200000 A
622 01 000DF      69100000 X
623 01 000E0      22200000 N
624 01 000E1      21800006 A
625 01 000E2      691000E4
626 01 000E3      22200000 N
627 01 000E4      68000000 X
628
629      01 000E5
630 01 000E5      22000000 N
631 01 000E6      22000000 N
632 01 000E7      22000000 N
633 01 000E8      22000000 N
634 01 000E9      22000000 N
635 01 000EA      68000000 X
636
637      00000006
638 01 000EB      22000000 N
639 01 000EC      22000000 N
640 01 000ED      22000000 N
641 01 000EE      22000000 N
    
```

\*\*\*\*\*

THE REGISTER SETUP AT LOCATION CAL17 IS AS FOLLOWS:

```

(R6) = DCB ADDRESS OR LINE ID ADDRESS
(R7) = WA(FPT+1)
(SR1) = FPT CODE
(SR4) = WA(TRAPEXIT)
    
```

CAL17

```

EQU $
C1,SR1 C17TVEND          DO WE HAVE A LEGAL CODE
BGE     BADCAL          GUESS NOT
LI,R1  C17TV           GET TOP OF TRANSFER TABLE
EXU     *SR1,R1        EXECUTE TABLE INSTRUCTION
LI,R2  TTP            CK IF THIS IS A TP SYSTEM
BEZ     RADCAL        B, IF NOT; CAL IS A BADDY
LW,R2  RO             CK IF THIS IS AN MIGETID CAL
BLZ     T:GETID       B, IF SO, AND GO DO IT
LI,R2  TQ0V2SEG      ASSUME TQ2 OVERLAY IS NEEDED
C1,SR1 TQ0V2END      BUT CHECK ON THIS
BL      $+2           B, IF RIGHT
LI,R2  TQ0V1SEG      ELSE, LOAD SEG# FOR TQ1 OVERLAY
B       T:OVERLAY    AND GO TO IT
    
```

\* C17TV

```

EQU $
LI,RO  CNMPRBC0#      X'00' M,GETLINE
LI,RO  CNMPRBC1#      X'01' M,IRLSLINE
LI,RO  CNMPRBC2#      X'02' M,IBUFSTAT
LI,RO  CNMPRBC3#      X'03' M,PURGE
LI,RO  CNMPRBC4#      X'04' M,MDFLST
B       ECBCHECK      X'05' M,IECBCHECK
    
```

\* TQ0V2END

```

EQU $=C17TV
LI,RO  TQUEUE#       X'06' MIQUEUE UNLOCK
LI,RO  TQUEUE#       X'07' MIQUEUE DEFINELIST
LI,RO  TQUEUE#       X'08' MIQUEUE PUT
LI,RO  TQUEUE#       X'09' MIQUEUE GET
    
```

H01 13:37 SEP 08, '75

642	01	000EF	22000000	N
643	01	000FO	22000000	N
644	01	000F1	22000000	N
645	01	000F2	220FFFFFF	A
646				
647		0000000E		

LI,RO	TQUEUE#
LI,RO	TQUEUE#
LI,RO	TQUEUE#
LI,RO	=1

X'0A'	M'QUEUE	STATS
X'0B'	M'QUEUE	PURGE
X'0C'	M'QUEUE	LOCK
X'0D'	MIGETID	

\*  
C17TVEND EQU      \*-C17TV

```

649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674 01 000F3 2180001D A
675 01 000F4 48200113
676 01 000F5 48000233
677 01 000F6 4800024C
678 01 000F7 48000239
679 01 000F8 48000239
680 01 000F9 48000000 X
681 01 000FA 48000000 X
682 01 000FB 22000000 N
683 01 000FC 48000000 X
684 01 000FD 48000000 X
685 01 000FE 48000000 X
    
```

```

*****
*
* CAL1,8 HANDLER
*
* INPUT:
*   SR1          FPT CODE (RIGHT JUSTIFIED)
*
* OUTPUT:
*   RO          OVERLAY TRANSFER VECTOR INDEX IF ROUTINE IS OVERLAYED
*
* ENTRY POINTS:
*   CAL18
*
* EXITS:
*   TO MONOVLY IF ROUTINE IS OVERLAYED
*   TO BADCAL IF FPT CODE IS INVALID
*   TO THE SPECIFIED ROUTINE IF NONE OF ABOVE.
*
* REGISTERS DESTROYED:
*   R1
*
* NOTE:
*   SR4 CONTAINS THE ADDRESS OF TRAPEXIT (WAS LOADED IN CALPROC).
*
*****
CAL18  CI,SR1  HICAL18  C/FPT CODE W/HIGHEST LEGAL CODE
        BLE    C18A   BLE: FPT CODE PROBABLY LEGAL
C18TV  B      BADCAL  X'00' NON-EXISTENT
        B      MSEGLO X'01' M,SEGLD
        B      MLNK   X'02' MILINK
        B      MLNK   X'03' MILDTRC
        B      TIGVP  X'04' MIGVP
        B      TIFVP  X'05' MIFVP
        LI,RO  TICTBL# X'06' MICT
        B      TISAD  X'07' MICVM
        B      TIGDP  X'08' MIGP
        B      TIFDP  X'09' MIFP
    
```

```

686 01 000FF 68000000 X
687 01 00100 68000000 X
688 01 00101 68000000 X
689 01 00102 68000000 X
690 01 00103 22000000 N
691 01 00104 22000000 N
692 01 00105 22000000 N
693 01 00106 22000000 N
694 01 00107 22000000 N
695 01 00108 6800027A
696 01 00109 6800029F
697 01 0010A 6800012A
698 01 0010B 6800012A
699 01 0010C 6800012A
700 01 0010D 6800012A
701 01 0010E 22000000 N
702 01 0010F 68000116
703 01 00110 22000000 N
704 01 00111 68000281
705 01 00112 68000248
706          0000001D
707
708 01 00113 221000F5
709 01 00114 F7020008 A
710 01 00115 68000025
711
712
713 01 00116 22000000 N
714 01 00117 22B0014F
715 01 00118 6800011A
716 01 00119 22000000 N
717 01 0011A 22200000 N
718 01 0011B 68000000 X
    
```

```

B      TISM#
B      TIGL
B      TIGCP
B      TIFCP
LI,RO  MINT#
LI,RO  TIWAIT#
LI,RO  MTIME#
LI,RO  MSTIMER#
LI,RO  MTTIMER#
B      T:SYSLOAD
B      MTRAP
B      RESOURCE
B      RESOURCE
B      RESOURCE
B      RESOURCE
LI,RO  MXCON#
B      CALMUL1
LI,RO  TIGDDL#
B      MFSI
B      MICOUPLE
EQU    s=C18TV=1
*
C18A  LI,R1  C18TV
EXU   *SR1,R1
B     MONOVLY
*
CALMUL1 LI,RO  LDEV#
      LI,11  CC1RST
      B     **2
CALMUL2 LI,0   CCL0SE#
      LI,2   MULSEG
B     T:OVERLAY
    
```

```

X'0A' MISMPT
X'0B' MIGL
X'0C' MIGCP
X'0D' MIFCP
X'0E' MIINT
X'0F' MIWAIT
X'10' MIMTIME
X'11' MIMTIMER
X'12' MITTIMER
X'13' MIDISPLAY
X'14' MITRAP
X'15' SET RESOURCE
X'15' SET RESOURCE
X'15' SET RESOURCE
X'15' SET RESOURCE
X'19' MIXCON
X'1A' MILDEV
X'1B' MIGDDL
X'1C' MIASI OR MIFSI
X'1D' MICOUPLE OR MIDFCOUPLE
HIGHEST LEGAL FPT CODE FOR CAL1,8
L,ADDRESS OF CAL1,8 TRANSFER VECTOR
EXECUTE INSTRUCTION IN TV
B: RO = MISOV (UCAL) OVERLAY TV INDI
    
```

H01 13137 SEP 08, 175

720		01 0011C		
721	01	0011C	32400000	X
722	01	0011D	52480000	X
723	01	0011E	21400080	A
724	01	0011F	68400155	
725	01	00120	22200000	A
726	01	00121	75200000	X
727	01	00122	75200000	X
728	01	00123	2231FFFF	A
729	01	00124	47200000	F
730	01	00125	22300002	A
731	01	00126	47200000	X
732	01	00127	6800014F	
733				
734				
735	01	00128	0F000000	X
	01	00129	007C0100	A

TICLRERR EQU

	LW,4	SICUN
	LH,4	UHIFLG,4
	CI,4	TIC
	BAZ	CC1SET
	LI,2	0
	STB,2	JIRNST
	STB,2	J1ABC
	LI,3	X'1FFFF'
	STS,2	J1JIT+ER0
	LI,3	2
	STS,2	JITELFLGS
	B	BKOUT

COMMAND PROCESSOR REQUEST  
 NOPE,ERROR  
 YES, CLEAR  
 THE RUN STATUS  
 THE ABORT CODE  
 L/M17 MASK  
 CLEAR ERROR AND ER0 FIELDS IN JIT  
 AS WELL AS THE BREAK BIT  
 IN JITELFLGS

•  
•  
SCR7C

SUA X'7C1

SUA .7C

H01 13:37 SEP 08, 1975

737		01	0012A	
738	01	0012A	22100000	N
739	01	0012B	2160C000	A
740	01	0012C	68400133	
741	01	0012D	2270FFFF	A
742	01	0012E	52220000	X
743	01	0012F	45600002	A
744	01	00130	68300137	
745	01	00131	6410012E	
746	01	00132	68000151	
747	01	00133	71620000	X
748	01	00134	68300137	
749	01	00135	64100133	
750	01	00136	68000151	
751	01	00137	22200008	A
752	01	00138	82840000	X
753	01	00139	69100155	
754	01	0013A	52220000	X
755	01	0013B	48200000	X
756	01	0013C	32300008	A
757	01	0013D	2120C3D6	A
758	01	0013E	69300142	
759	01	0013F	21800001	A
760	01	00140	69400153	
761	01	00141	2530007F	A
762	01	00142	72220000	X
763	01	00143	38200008	A
764	01	00144	69100155	
765	01	00145	71220000	X
766	01	00146	69100155	
767	01	00147	75220000	X
768	01	00148	70200000	X
769	01	00149	69C0014F	
770	01	0014A	52220000	X
771	01	0014B	48200000	X
772	01	0014C	38200003	A
773	01	0014D	55220000	X

RESOURCE	EQU	\$
	LI,R1	SVIRSTZ
	CI,R6	X'COOO'
	BAZ	KRD5
	LI,R7	X'FFFF'
KRD4	LH,R2	SHIRNM,R1
	CS,R6	R2
	BE	KRD2
	BDR,R1	KRD4
	B	CC3SET
KRD5	CB,R6	SBIRTY,R1
	BE	KRD2
	BDR,R1	B=2
	B	CC3SET
KRD2	LI,R2	SR1
	LW,SR1	+JIBASE,R2
	BL	CC1SET
	LH,R2	SHIRNM,R1
	AND,R2	X'FFFF'
	LW,R3	SR1
	CI,R2	'C0'
	BNE	KRD1
	CI,SR1	1
	BANZ	CC2SET
	SLS,R3	=1
KRD1	LB,R2	JBIMAX,R1
	SW,R2	SR1
	BLZ	CC1SET
	CB,R2	JBICUR,R1
	BL	CC1SET
	STB,R2	JBIMAX,R1
	LC	JIJIT
	BCS,12	CC1RST
	LH,R2	SHIRBCU,R1
	AND,R2	X'FFFF'
	SW,R2	R3
	STH,R2	SHIRBCU,R1

SIZE OF RAT TABLES  
 TEXT RESOURCE NAME SPECIFIED  
 NO=ASSUME DEVICE TYPE CODE

RESOURCE NAME FOUND IN RAT TABLE  
 YES

ERROR=CANT FIND NAME  
 DEVELOP RATX BY MATCH OF TYPE CODE  
 RRTX

ERROR=BAD TYPE CODE

GET USERS SR1=NUMBER TO RELEASE  
 DO NOT ALLOW NEG. SPECIFICATION  
 RESOURCE NAME

SAVE NL  
 CORE RESOURCE  
 NO  
 YES=EVEN NUMBER OF PAGES SPECIFIED  
 NO=ERROR

K  
 MAXIMUM PERMITTED THIS USER  
 SUBTRACT NUMBER TO BE RELEASED  
 ERROR=RELEASED MORE THAN OWNED  
 NUMBER CURRENTLY IN USE  
 ERROR=MAXIMUM EXCEEDED  
 REDUCE NUMBER PERMITTED THIS JOB

0=BATCH,1=GHOST,2=ONLINE  
 REDUCE NUMBER CURRENTLY ALLOCATED

```

H01 13:37 SEP 08, 1975
774 01 0014E 33100000 X MTW,1 SIMBSF START THE MBS
775 01 0014F 0KOUT EQU $
776 01 0014F CCRST EQU $
777 01 0014F CC1RST EQU $
778 01 0014F 22C00000 A LI,12 0 RESET CC1 & CC2
779 01 00150 68000156 B OUT
780 01 00151 32C0001E N CC3SET LW,D1 Y2
781 01 00152 68000156 B OUT
782 01 00153 CC2SET EQU $
783 01 00153 32C0001F N LW,12 Y4
784 01 00154 68000156 B OUT
785 01 00155 32C00020 N CC1SET LW,12 Y8
786 *
787 * IN: R12 CONTAINS CONDITION CODES IN FIRST 4 BITS
788 *
789 01 00156 OUT EQU $
790 01 00156 32D00000 X LW,13 YE RESET CC1,CC2,CC3
791 01 00157 221FFFFE A LI,1 =17 LWD FROM TOP OF TSTACK TO PSD
792 01 00158 30100000 X AW,1 TSTACK GADR OF PSD IN TSTACK
793 01 00159 4B100000 X AND,1 X1FFFE BOUND 8
794 01 0015A 47C20000 A STS,12 0,1 S/CC'S INTO PSD
795 01 0015B 48000000 X B TRAPEXIT
796 *
797 *

```



```

800 01 0015C
801 01 0015C 22600000 N
802
803
804
805 01 0015D 48400000 X
806 01 0015E 68300165
807 01 0015F 72100000 X
808 01 00160 21100020 A
809 01 00161 68400155
810 01 00162 48100006 N
811 01 00163 75100000 X
812 01 00164 68000186
813 01 00165
814 01 00165 32100000 X
815 01 00166 52320000 X
816 01 00167 21300040 A
817 01 00168 68400186
818 01 00169 22500000 N
819 01 0016A 203FFFC0 A
820 01 0016B 55320000 X
821 01 0016C 72220000 X
822 01 0016D 68300187
823 01 0016E 48300001 N
824 01 0016F 55320000 X
825 01 00170 72420000 X
826 01 00171 73F80000 X
827 01 00172 52E20000 X
828 01 00173 21E00800 A
829 01 00174 6840017A
830 01 00175 73F80000 X
831 01 00176 6920017A
832 01 00177 72480000 X
833 01 00178 3A400004 A
834 01 00179 66400000 X
835 01 0017A 73140000 X
836 01 0017B 22600000 N
    
```

```

MTRTN RES 0
LI,6 TISSEM RETURN
* UPON ENTRY FROM ALTCR,R4 HAS BEEN SFT UP TO CONTAIN
* INFO. AS TO WHETHER IT IS A XCON RETURN
*
AND,R4 XFF00 NOT A XCON RETURN
BEZ MTRTNO
LB,R1 JIEXTENT
CI,R1 X'20' SEE IF XCON HAS BEEN IN PR0G.
BAZ CC1SET NO,RETURN TO CAL+1 WITH CC1 SET
AND,R1 XFFDF
STB,R1 JIEXTENT RESET THE XIT-IN-PR0G. BIT
B TMPT0STK GO MOVE TRAPPED ENVIR. TO TSTACK

MTRTNO RES 0
LW,1 SICUN
LH,3 UHIFLG,1
CI,3 DIC
BAZ TMPT0STK
LI,5 SPDBASE DEBUG STACK
AI,3 =DIC RESET DELTA IN CONTROL
STH,3 UHIFLG,1
LB,2 UB1ASP,1 CORE LIBRARY ASSSOC
BEZ TMPT0STK+1 NO
AND,3 XFFFE RESET READY TO RUN
STH,3 UHIFLG,1
LB,4 UB1DB,1
MTB,-1 PBIUC,4 DEBUG DOWN
LH,14 UHIFLG2,1
CI,14 X'800' LOCKED IN CORE
BAZ MTRTNOA NO
MTB,-1 PBIUCT,4 DECREMENT LOCK COUNT
BG MTRTNOA STILL LOCKED
LB,4 PB;PSZ,4 UNLOCKED, THEN
LCW,4 4 DECREMENT RYCORE
AWM,4 S;RTCORE BY PSZ

MTRTNOA MTB,1 PBIUC,2 CORE LIBRARY UP
LI,6 E;AP
    
```

H01 13:37 SEP 08, 175  
 837 01 0017C 6AB00000 X  
 838 01 0017D 21E00800 A  
 839 01 0017E 68400184  
 840 01 0017F 73040000 X  
 841 01 00180 69200183  
 842 01 00181 72E40000 X  
 843 01 00182 66E00000 X  
 844 01 00183 73140000 X  
 845 01 00184 22600000 N  
 846 01 00185 68000187

BAL,11  
 CI,14  
 BAZ  
 MTB,0  
 BG  
 LB,14  
 AWM,14  
 MTB,1  
 LI,6  
 B  
 TIREG  
 X'800'  
 MTRTNOB  
 PBILCT,2  
 \$+3  
 PBIPS,2  
 S;RTCORE  
 PBILCT,2  
 YISSEM  
 TMTBSTK+1

GET THE LIBRARY  
 NOT LOCKED  
 ALREADY ACCOUNTED FOR  
 ADD IT IN  
 BUMP LCT

848 01 00186  
 849 01 00186 32500000 X  
 850 01 00187 22400000 N  
 851 01 00188 32E002E9  
 852 01 00189 32300005 A  
 853 01 0018A 6A71FFFF N  
 854 01 0018B 683A0001 A  
 855 01 0018C 4B30000F N  
 856 01 0018D 203FFFEC A  
 857 01 0018E 69100000 X  
 858 01 0018F 323A0000 A  
 859 01 00190 6A700000 X  
 860 01 00191 323A0000 A  
 861 01 00192 203FFFED A  
 862 01 00193 30360000 A  
 863 01 00194 6A700000 X  
 864 01 00195 324A0000 A  
 865  
 866 01 00196 223FFFF7 A  
 867 01 00197 92860004 A  
 868 01 00198 223FFFFE A  
 869 01 00199 30300000 X  
 870 01 0019A 92A00003 A

TMTBSTK RES  
 LW,5  
 LI,4  
 LW,14  
 LW,3  
 BAL,7  
 INT,3  
 AND,3  
 AI,3  
 BLZ  
 LW,3  
 BAL,7  
 LW,3  
 AI,3  
 AW,3  
 BAL,7  
 LW,4  
 LI,3  
 LD,8  
 LI,R3  
 AW,R3  
 LD,10  
 0  
 J;TCB  
 TIABORTM  
 \*X'010000A3'  
 5  
 CHKPRBT=1  
 1,5  
 M15  
 =20  
 TIABORTM  
 0,5  
 CHKPRBT  
 0,5  
 =19  
 0,3  
 CHKPRBT  
 0,5  
 =9  
 \*4,3  
 =17  
 TSTACK  
 \*3

USER TEMP STK  
 ERROR CODE  
 SCRUB WORD TRAP MASK  
 TRAP PSD  
 PSD LOC IN TSTACK

\*MOVE ENVIRONMENT FROM USER'S STACK TO TSTACK

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871 01 0019B 32900000 X  
872 01 0019C 72700000 X  
873 01 0019D 217000C0 A  
874 01 0019E 691001A0  
875 01 0019F 49900018 N  
876 01 001A0 4780000A A  
877 01 001A1 95A00003 A  
878 01 001A2 02200080 A  
879 01 001A3 2A79FFF8 A  
880 01 001A4 2B76000A A  
881 01 001A5 2A79FFF0 A  
882 01 001A6 2B760002 A  
883 01 001A7 32E002E9  
884 01 001A8 3279FFED A  
885 01 001A9 683001AC  
886 01 001AA 217FFFFFF A  
887 01 001AB 69300000 X  
888 01 001AC 207FFFEC A  
889 01 001AD 22400002 A  
890 01 001AE 02880005 A  
891 01 001AF 4B80000F N  
892 01 001B0 38800007 A  
893 01 001B1 21807FFF A  
894 01 001B2 69200000 X  
895 01 001B3 93700005 A  
896 01 001B4 32700001 A  
897 01 001B5 32B00006 A  
898 01 001B6 68000000 X

LW,9 FF3FFFFFF  
LB,R7 JBIPRIV  
CI,R7 X'COI  
BL \$+2  
BR,9 Y008  
STS,8 10  
STD,10 +3  
LCI 8  
LM,7 \*8,4  
STM,7 10,3  
LM,7 \*16,4  
STM,7 2,3  
LW,14 \*X'010000A3!  
LW,7 \*19,4  
BEZ \$+3  
CI,7 \*1  
BNE TIABORTM  
AI,7 \*20  
LI,4 2  
LH,8 \*5,4  
AND,8 M15  
SW,8 7  
CI,8 X'7FFF!  
BG TIABORTM  
MSP,7 \*5  
LW,7 1  
LW,11 6  
B T1PAC

CHECK PRIV  
PERMIT CO USER TO  
CONTROL SLAVE BIT IN PSD  
SET MASK BIT FOR SLAVE BIT

IN CASE WE ABORT  
STACK BALANCE WORD  
ZERO OK  
AS IS MINUS ONE

SPACE COUNT  
SCRUB SPACE TRAP MASK

FOR MSTRAP  
RETURN

```

900
901      01 001B7
902
903      01 001B7      6AB00000 X
904      01 001B8      32200000 X
905      01 001B9      202FFFFE A
906      01 001BA      92000002 A
907      01 001BB      60000037 A
908      01 001BC      95000007 A
909      01 001BD      323E0002 A
910      01 001BE      35300000 X
911      01 001BF      224FFFFE A
912      01 001C0      13400000 X
913      01 001C1      02200000 A
914      01 001C2      2A040002 A
915      01 001C3      F8000000 X
916
917      01 001C4
918      01 001C4      22200001 N
919      01 001C5      55140000 X
920
921      01 001C6      227000FF A
922      01 001C7      31000017 N
923      01 001C8      68400000 X
924      01 001C9      31000018 N
925      01 001CA      694001D1
926      01 001CB      72200000 X
927      01 001CC      212000C0 A
928      01 001CD      69100000 X
929      01 001CE      4B000011 N
930      01 001CF      2100A000 A
931      01 001D0      69100000 X
932      01 001D1      32400000 X
933      01 001D2      52F80000 X
934      01 001D3      21F004C0 A
935      01 001D4      6840020F
936      01 001D5      21F00080 A
    
```

```

*
MSTRAPXIT EQU *
*EXIT ROUTINE FOR MSTRAP
BAL,11      Y,SELFDESTRUCT      ZAP MIS0V
LW,2        TSTACK
AI,2        #17      POINT TO PSD
LD,0        #2        GET IT
WD,0        X'37'     DISABLE
STD,0       #7        FAKE BUT ENTRY
LW,3        2,7      GET HANDLER ADDRESS
STW,3       TEMP     SAVE IT
LI,4        #19      TSTACK      EMPTY STACK
MSP,4
LCI         0
LM,0       2,2      LOAD REGISTERS
B           *TEMP
*
40TRAP EQU *
LI,2        MPP0+MPP0+1      SET INDEX
STH,R1     JIJIT,R2      TRAP# AND CCS
*
LI,R7      X'FFF'      MASK TO STORE TRAP CELL SUB CODE
CW,0       Y004      WAS TRAPPING USER UNMAPPE...
BAZ        ABORT     ***> YES, SCREECH.
CW,0       Y008      WAS TRAPPING USER MASTER MODE...
BANZ      TRAP10     ***> NO.
LB,2       JBIPRIV   GET USER PRIV
CI,2       X'COI'    CAN HE BE MASTER MODE
BL         ABORT     NO, SCREECH
AND,0     M17      SCRUB ADDRESS
CI,0      XIA000I    CHECK FOR USER AREA
BL        ABORT     NO, SCREECH
TRAP10    LW,4      SICUN   R4 = CURRENT USER #.
LW,15     UHIFLG,4  R15 = FLAGS FOR THIS USER.
CI,15     TIC+DIC+DELA IS TEL IN CONTROL OR DELTA ASSOC.
BAZ       TRAP40    ***> NO.
CI,15     TIC       IS TEL IN CONTROL.
    
```

```

937 01 001D6 69400000 X
938 01 001D7 21F00040 A
939 01 001D8 68400209
940
941 01 001D9 7160001F N
942 01 001DA 69300209
943
944 01 001DB 70200006 A
945
946 01 001DC 68100209
947
948 01 001DD F2200000 A
949 01 001DE 2520017B A
950 01 001DF 25300065 A
951 01 001E0 22360001 N
952 01 001E1 31340006
953 01 001E2 68400209
954 01 001E3 09600000 X
955 01 001E4 B2000000 A
956 01 001E5 09000000 X
957 01 001E6 32100000 X
958 01 001E7 02200000 A
959 01 001E8 2A03FFEF A
960 01 001E9 C4700000 X
961 01 001EA 74000001 A
962 01 001EB 25100062 A
963 01 001EC 25720075 A
964 01 001ED 19700000 X
965 01 001EE 69900205
966 01 001EF 6AB00000 X
967 01 001F0 69200205
968 01 001F1 32100000 X
969 01 001F2 201FFFFEF A
970 01 001F3 35100000 X
971 01 001F4 201FFFFFE A
972 01 001F5 4B100001 N
973 01 001F6 35100001 N
    
```

```

BANZ SCR61
CI,15 DIC
BAZ TRAP30
*
CB,6 Y4
BNE TRAP30
*
LC 6
*
BCR,1 TRAP30
*
LB,R2 *R0
SLD,R2 *5
SLS,R3 *27
LW,R3 BT31T00+1,R3
CW,R3 OPTBL,R2
BAZ TRAP30
PSW,R6 TSTACK
LW,R0 *R0
PSW,R0 TSTACK
LW,R1 TSTACK
LCI 0
LM,R0 *17,R1
ANL2,R7 *TSTACK
STCF R1
SLS,R1 *30
SLS,R7 *11,R1
CLM,R7 JIPLL
BCS,9 TRAP28
BAL,R11 TIIACU
BCS,2 TRAP28
LW,R1 TSTACK
AI,R1 *17
STW,R1 JIBASE
AI,R1 *2
AND,R1 NB31T00+1
STW,R1 JIBASE+1
    
```

```

----> YES; SCREECH.
WAS DELTA IN CONTROL.
----> NO. GO TO DELTA.
YES. SPECIAL CHECKS NEEDED.

CHECK TRAP TYPE-IF NOT MEM VIOL,
CANT BE PATCH TO PROCEDURE BY DELTA
NORMAL TRAP

GET OPCODE
FORM BIT
AND WORD INDICES
CHECK FOR
ALLOWED OPCODE
NO, NORMAL TRAP
SAVE TRAP LOC, TCC
GET TRAPPING INSTRUCTION
AND SAVE IT
RESTORE
DELTA'S
REGISTERS
GET EFFECTIVE
ADDRESS
AND MAKE IT
A PAGE
IS IT PROCEDURE
NO, NORMAL TRAP
CHECK ACCESS
10,11 NORMAL TRAP
SET UP POINTER
TO DELTA'S
REGISTERS
AND TO
DELTA'S
PSW1
    
```

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974	01	001F7	02200000	A	LCI	0	RESTORE
975	01	001F8	AA000000	X	LM,R0	*JIBASE	DELTA,S REGISTERS
976	01	001F9	F0300001	N	LCF	*(JIBASE+1)	AND CC,FC
977	01	001FA	F7000000	X	EXU	*TSTACK	EXU DELTA'S STORE INTO PP
978	01	001FB	F4000001	N	STCF	*(JIBASE+1)	UPDATE CC,FC
979	01	001FC	02200000	A	LCI	0	UPDATE
980	01	001FD	AB000000	X	STM,R0	*JIBASE	DELTA,S REGISTERS
981	01	001FE	221FFFFE	A	BUMP	*2,1	
	01	001FF	13100000	X			
982					*		
983	01	00200	32100000	X	LW,1	SICUN	* SET
984	01	00201	52220000	X	LW,2	UHIFLG,1	* PROCEDURE
985	01	00202	49200005	N	BR,2	X10	SET PPSWAP
986	01	00203	55220000	X	STH,2	UHIFLG,1	*
987	01	00204	68000000	X	B	TRAPEXIT	GO BACK TO USER+1
988					*		
989	01	00205			TRAP28	RES	0
990	01	00205	08100000	X	PLW,1	TSTACK	
991	01	00206	08600000	X	PLW,6	TSTACK	
992	01	00207	32400000	X	LW,4	SICUN	R4= USER# AND R15= FLAGS.
993	01	00208	52F80000	X	LW,15	UHIFLG,4	(FOR DELTAG8).
994					*		
995	01	00209	220000FF	A	TRAP30	LI,0	XIFF1
996	01	0020A	4B000006	A	AND,0	6	PREPARE TO GO TO DELTA;
997	01	0020B	22A0000C	N	LI,10	SPPBASE+XIC1	R0= TRAP ADDRESS (INTO DELTASTACK)
998	01	0020C	72600006	A	LB,6	6	R10= DELTA ENTRY ADDRESS.
999	01	0020D	7560000A	A	STB,6	10	ADD CC/FC FROM TRAP.
1000	01	0020E	68000000	X	B	DELTAG8	-----> GO TO DELTA.
1001					*		
1002		01 0020F			TRAP40	EQU	* TRAP WITH DELTA NOT ASSOCIATED.
1003	01	0020F	25300000	N	SLS,R3	TRAPFLGB	
1004	01	00210	31300000	X	CW,R3	JUSENT	DOES USER HAVE TRAP CONTROL...
1005	01	00211	69400221		BANZ	STKTOTMP	---> YES, GO TO USER CONTROL.
1006	01	00212	22E0000F	A	LI,14	XIF1	NO, ABORT THE USER.
1007	01	00213	4BE00006	A	AND,14	6	GET TRAPLOC: (X FROM 4X IN R6).
1008	01	00214	6830021B		BEZ	TRAP40A	---> TRAP 40.
1009	01	00215	20E00004	A	AI,14	4	SUBCODE FOR TRAP4X IS X+4.

```

1010 01 00216 6800021E
1011 01 00217 00040300 A
1012 01 00218 02040000 A
1013 01 00219 01000100 A
1014 01 0021A 00000000 A
1015 01 0021B 72700006 A
1016 01 0021C 2570007C A
1017 01 0021D 72EE0217
1018 01 0021E 25E00278 A
1019 01 0021F 20E000A4 A
1020 01 00220 68000000 X
1021
1022      01 00221
1023 01 00221 2211FFFF A
1024 01 00222 4B100000 X
1025 01 00223 69300227
1026 01 00224 2211FFFF A
1027 01 00225 4B100005 N
1028 01 00226 47100000 X
1029 01 00227 220000FF A
1030 01 00228 4B000006 A
1031 01 00229 32A00000 X
1032 01 0022A 72600006 A
1033 01 0022B 7560000A A
1034 01 0022C 32B002EA
1035 01 0022D 22E000A3 A
1036 01 0022E 6A400000 X
1037 01 0022F 68000000 X
1038 01 00230 32100000 X
1039 01 00231 35160009 A
1040 01 00232 68000000 X
    
```

```

B TRAP40B
*OSUBS GEN,8,8,8,8 0,4,3,0
GEN,8,8,8,8 2,4,0,0
GEN,8,8,8,8 1,0,1,0
GEN,8,8,8,8 0,0,0,0
TRAP40A LB,7 6
SLS,7 =4
LB,14 *OSUBS,7
TRAP40B SCS,14 =8
AI,14 XIA4
B TIABORTM
*
STKT0TMP EQU $
LI,1 X'1FFFF'
AND,1 JITCB
BNEZ STKT0T10
LI,1 X'1FFFF'
AND,1 TSTACK*5
SYS,1 JITCB
STKT0T10 LI,0 X'FFF'
AND,0 6
LW,10 JIUSENT
LB,6 6
STB,6 10
LW,11 L(X'FF01FFFF')
LI,14 X'A3'
BAL,4 T;UTSXTS
B TIABORTM
LW,R1 JIALB
STW,R1 R7+2,R3
B T;SSEM
    
```

SUBCODES FOR TRAP 40:  
 1=NEI 2=NEM 3=PI 4=MPV  
 0=IMPOSSIBLE.

SUBCODE FOR TRAP40  
 DEPENDS ON TRAPCC.

GET ERROR SUBCODE IN R7.  
 ADD ERROR CODE IN 24\*31.  
 ----> GO ABORT USER.

TRAP WITH TRAP CONTROL IN USER.

R1 => USER TCB.  
 ----> USER HAS A TCB.

GET TCB FROM USER R0 IF NONE YET.

R0 TO USERSTACK (TRAP ADDRESS).

GO TO JIUSENT WITH CC SET BY TRAP.

R14= ABORT CODE IF USERSTACK BAD.  
 COPY TSTACK TO USER STACK.

----> USER STACK IS BAD.  
 PUT 560 ADDRESS OF LAST  
 BRANCH REG. IN GO REG 7  
 SCHEDULE, PULL, & GO TO USER.

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1042		01 00233	
1043	01 00233	22E000AE	A
1044		01 00234	
1045	01 00234	22300080	A
1046	01 00235	25300000	N
1047	01 00236	31300000	X
1048	01 00237	69400221	
1049	01 00238	68000000	X

BADCAL

EQU  
LI,R14

\$  
X'AE'

ILLEGAL CAL1,  
R14 = ABORT CODE.

CALBAD

EQU  
LI,3  
SLS,3  
CW,3  
BANZ  
B

\$  
X'80'  
TRAPFLGB  
JIUSENT  
STKTOTMP  
TIABORTM





```

1088
1089
1090
1091
1092 01 00244
1093 01 00244 22200000 N
      01 00245 22000000 N
      01 00246 6AB00000 X
1094 01 00247 68000000 X
1095
1096
1097
1098      01 00248
1099 01 00248 22200000 N
      01 00249 22000000 N
      01 0024A 6AB00000 X
1100 01 0024B 68000000 X
    
```

```

*D*
*D*
*D*
*D*
MLNK1 RES 0
      OVERLAY LDLNKSEG#LDLNK#

      B TRAPEXIT
*
* GO TO COUPLE/DECUPLE LOGIC
*
MCUPLE EQU *
      OVERLAY LDLNKSEG#T;COUPL#

      B TRAPEXIT
    
```

OTHERWISE, OR AFTER RETURN FROM THE EXIT CONTROL LOGIC, THE LNKTRC OVERLAY IS ENTERED.

1102  
 1103  
 1104  
 1105  
 1106  
 1107  
 1108  
 1109  
 1110  
 1111  
 1112  
 1113  
 1114  
 1115  
 1116  
 1117  
 1118  
 1119  
 1120  
 1121  
 1122  
 1123  
 1124  
 1125  
 1126  
 1127  
 1128  
 1129  
 1130  
 1131  
 1132  
 1133  
 1134  
 1135  
 1136  
 1137  
 1138

01 0024C 01 0024C 6A100274  
 01 0024D 69400278  
 01 0024E 09700000 N  
 01 0024F 09600000 N

```

*F*
*F* NAME: MSEGLED
*F*
*F* PURPOSE: TO PROCESS THE MISEGLD CAL.
*F*
*F* DESCRIPTION: IF THE CAL WAS ISSUED BY A USER PROGRAM,
*F* CONTROL PASSES TO SEGLD IN THE MIS0V OVERLAY.
*F*
*F* IF ISSUED BY A SHARED PROCESSOR, CONTROL PASSES
*F* TO THE T1PROCOV ROUTINE IN T10V.
*F*
*D* NAME: MSEGLED
*D*
*D* INPUT: R6 = FPT WORD 0
*D* R7 = WA(FPT WORD 1)
*D*
*D* OUTPUT: IF ISSUED FROM A USER PROGRAM:
*D* R6 = J:DCBLINK
*D* SR2 = WA(SEGMENT NAME)
*D*
*D* IF ISSUED BY A SHARED PROCESSOR:
*D* R4 = INDEX TO OVERLAY IN PROCESSOR TABLES
*D*
*D* DESCRIPTION: IF THE MISEGLD CAL WAS ISSUED BY A REAL-TIME
*D* USER WHO HAS LOCKED HIMSELF IN CORE, HE IS ABORTED.
*D*
MSEGLED EQU $
BAL,R1 RTCHK CHECK IF THIS USER IS A REAL-TIME
* USER WHO HAS LOCKED HIMSELF IN CORE
* THIS ROUTINE RETURNS SICUN IN R4
BCS,4 RTCHKERR YES, HE IS! ABORT HIM
*D*
*D* IF THE CAL WAS ISSUED BY A USER PROGRAM, CONTROL
*D* PASSES TO SEGLD IN THE MIS0V OVERLAY.
*D*
*D*
PUSH R7 FPT ADDRESS + 1 INTO STACK:
PUSH R6 ECB ADDRESS (BR 0) INTO STACK:
    
```

```

1139 01 00250 329E0000 A
1140 01 00251 68100256
1141 01 00252 2191FFF0 A
1142 01 00253 69400255
1143 01 00254 30900000 X
1144 01 00255 82900009 A
1145 01 00256 2191FFF0 A
1146 01 00257 69400259
1147 01 00258 30900000 X
1148 01 00259 72480000 X
1149 01 0025A 6930025F
1150 01 0025B 32600000 X
1151 01 0025C 22200000 N
      01 0025D 22000000 N
      01 0025E 68000000 X
    
```

```

LW,SR2 0,R7
BGEZ SEGLD0
CI,SR2 X'1FFF0'
BANZ $+2
AW,SR2 JIBASE
LW,SR2 *SR2
CI,SR2 X'1FFF0'
BANZ $+2
AW,SR2 JIBASE
LB,4 UBIAPR,4
BNEZ SEGLD1
LW,R6 JIDCBLINK
OVERTO MIS0VSEG,SEGLD*
    
```

```

SR2, ADDRESS OF SEGMENT NAME.
---, GOT ADDRESS DIRECTLY.
INDIRECT ADDRESS,
CONVERT REGISTER ADDRESS
INTO STACK ADDRESS.
GO INDIRECT.
CONVERT
REGISTER ADDRESS
INTO STACK ADDRESS,
IS IT A SHRD PROC
R6 => DCB NAME TABLE.
    
```

```

1152
1153
1154
1155
1156
1157
1158      01 0025F
1159 01 0025F 72480000 X
1160 01 00260 68300271
1161
1162
1163
1164
1165
1166
1167
1168 01 00261 02200020 A
1169 01 00262 AA000009 A
1170 01 00263 22200040 A
1171 01 00264 72300000 A
1172 01 00265 21300007 A
1173 01 00266 6810026A
    
```

```

*D*
*D*
*D*
*D*
*D*
*D*
SEGLD1
EQU
LB,4
BEZ
*D*
*D*
*D*
*D*
*D*
*D*
*D*
DCT
LM,0
LI,2
LB,3
CI,3
BGE
NXTBLK
    
```

IF THE CAL WAS ISSUED BY A SHARED PROCESSOR, BUT  
PBILNK (OVERLAY LINK) IS ZERO, THE PROCESSOR IS  
RUNNING NON-OVERLAID AND CONTROL RETURNS TO THE  
PROCESSOR.

IS THE SHARED PROCESSOR OVERLAID.  
---> NO WE'RE FINISHED.

OTHERWISE, THE SEGMENT NAME IS FOUND IN THE P,NAME  
TABLE BY LINKING THROUGH PBILINK AND THE OVERLAY IS  
IS LOADED VIA THE T:PROCOV IN T:OV. IF THE SEGMENT  
NAME IS NOT FOUND, THE PROCESSOR IS ABORTED WITH  
ERRBR CODE B1-01.

RO/R1 = SEGMENT NAME.  
BLANK=PAD  
THE TEXTC NAME  
IN RO/R1.  
---> ALL PADDED.

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1174 01 00267 20300001 A  
 1175 01 00268 75260000 A  
 1176 01 00269 48000265  
 1177 01 0026A 11080000 X  
 1178 01 0026B 68300270  
 1179 01 0026C 72480000 X  
 1180 01 0026D 6930026A  
 1181 01 0026E 22E000B1 A  
 1182 01 0026F 48000000 X  
 1183  
 1184  
 1185  
 1186  
 1187 01 00270  
 1188 01 00270 6A100000 X  
 1189 01 00271 08600000 N  
 1190 01 00272 08700000 N  
 1191 01 00273 48000000 X

NBPAD

AI,3 1  
 STB,2 0,3  
 B NXTBLK  
 CD,0 P:NAME,4  
 BF SEG30  
 LB,4 PBILNK,4  
 BNEZ NBPAD  
 LI,14 X'B1'  
 B T;ABORTM

(PAD IT TO ALLOW  
 SUCCESSFUL COMPARISON  
 WITH P;NAME ENTRIES.)  
 IS THIS THE SEGMENT...  
 ---> YES. (R4= P; INDEX.)  
 NO. KEEP LOOKING.  
 ---> MORE OVERLAY SEGMENTS.

-----> BAD NEWS.

\*E\*  
 \*E\* ERROR: B1.00  
 \*E\* MESSAGE: CAN'T FIND THAT OVERLAY SEGMENT  
 \*E\*

SEG30 EQU \*  
 BAL,1 T;PRBCOV  
 MSEG LDEX PULL 6  
 PULL 7  
 B TRAPEXIT



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1212		01	0027A	221FFFF6	A
1213	01	0027A		32800000	X
1214	01	0027B		32900000	X
1215	01	0027C		32A00000	X
1216	01	0027D		02200030	A
1217	01	0027E		AB820000	X
1218	01	0027F		68000000	X
1219	01	00280			

T:SYSLoad EQU

LI,1	\$
LW,8	*10
LW,9	CIETM
LW,10	CIRT90
LCI	SICUIS
STM,8	3
B	*TSTACK,1
	TRAPEXIT

PRINT TO REG 5 INSTACK  
 EXECUTION TIME MULTIPLIER  
 90% RESPONSE TIME  
 CURRENT USERS IN SYSTEM

1221		01	00281	21600001	A
1222	01	00281		69400285	
1223	01	00282		22000000	N
1224	01	00283		68000286	
1225	01	00284		22000000	N
1226	01	00285		22200000	N
1227	01	00286		68000000	X
1228	01	00287			

MFSI

EQU	\$
CI,6	1
BANZ	MASI
LI,0	T:FSI#
B	\$+2
LI,0	T:ASI#
LI,2	LDLNKSEG
B	T:OVER

IS IT MIFSI OR MIASI  
 B IF MIASI

GO DO IT...

H01 13,37 SEP 08, 175  
 1230 01 00288 22100000 A  
 1231 01 00288 32200000 X  
 1232 01 00289 48300290  
 1233 01 0028A 32200000 X  
 1234 01 0028B 52240000 X  
 1235 01 0028C 21201000 A  
 1236 01 0028D 69400290  
 1237 01 0028E 20F00003 A  
 1238 01 0028F 25F0007E A  
 1239 01 00290 30F00007 A  
 1240 01 00291 48F00011 N  
 1241 01 00292 25700077 A  
 1242 01 00293 25F00077 A  
 1243 01 00294 6AB00000 X  
 1244 01 00295 7400000B A  
 1245 01 00296 31B00001 A  
 1246 01 00297 6820029A  
 1247 01 00298 3210000B A  
 1248 01 00299 20700001 A  
 1249 01 0029A 3170000F A  
 1250 01 0029B 68200295  
 1251 01 0029C 70200001 A  
 1252 01 0029D F8000000 A  
 1253 01 0029E

CKLIMIT EQU \$  
 LI,1 0  
 LW,2 J;JIT  
 BEZ CKLIM8K  
 LW,2 S;CUN  
 LH,2 UH;FLG,2  
 CI,2 X'1000'  
 BANZ CKLIM8K  
 AI,15 3  
 SLS,15 =2  
 AW,15 7  
 AND,15 M17  
 SLS,7 =9  
 SLS,15 =9  
 CKLM1 BAL,11 T;IACU  
 STCF,0 11  
 CW,11 1  
 BLE \$+2  
 LW,1 11  
 AI,7 1  
 CW,7 15  
 BLE CKLM1  
 CKLIM8K LC 1  
 B \*0

CHECK ALL PAGES



MTRAP PROC. SET/RESET MASK/UNMASK, OR RESTORE  
 OLD TRAP CONDITIONS. RETURN PREVIOUS SETTINGS IN  
 SR1,SR2.

R7 = PLIST + 1, R6 = FIRST PARAMETER.

BYTE 0 = RESET, 1 = SET, 2 = MASK, 3 = UNMASK  
 BIT 2 = NAB, 3 = UI, 4 = PS, 5 = FP, 6 = DEC, 7 = FX.  
 BIT 0, WD 1 = 1 FOR RESTORE

```

1255
1256
1257
1258
1259
1260
1261
1262
1263
1264
1265 01 0029F 221FFFFEF A
1266 01 002A0 30100000 X
1267 01 002A1 92E00001 A
1268 01 002A2 32DE0000 A
1269 01 002A3 691002CD
1270 01 002A4 324A0000 X
1271 01 002A5 2271FFFF A
1272 01 002A6 476A0000 X
1273 01 002A7 322A0000 X
1274 01 002A8 5230000E A
1275 01 002A9 52C00002 A
1276 01 002AA 55C00003 A
1277 01 002AB 226FFFF9 A
1278 01 002AC 02200020 A
1279 01 002AD A83C0000 X
1280
1281 01 002AE 25C00108 A
1282 01 002AF 4BC00007 N
1283 01 002B0 20D00000 A
1284 01 002B1 681002B3
1285 01 002B2 49C00008 N
1286 01 002B3
1287 01 002B3 48C00020 N
1288 01 002B4 25C00200 N
1289 01 002B5 4B20000C A
1290 01 002B6 25C00108 A
1291 01 002B7 4BC00007 N
    
```

\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*  
\*

MTRAP

```

LI,R1 17
AW,R1 TSTACK
LD,D3 *R1
LW,D2 0,R7
BLZ RSTRTRAP
LW,R4 USRENT,R5
LI,R7 X11FFFF1
STS,R6 USRENT,R5
LW,R2 TRPFLAGS,R5
LW,R3 D3
LW,D1 R2
STH,D1 R3
LI,R6 7
LCI 2
STM,R3 *TSTACK,R6
    
```

\*

PREVIOUS TRAP CONDITIONS STORED INTO USER REGS SR1,SR2

MTRAP2

```

SLD,D1 8
AND,D1 M7
AI,D2 0
BGE MTRAP2
OR,D1 X80
EQU 9
EOR,D1 M32
SCS,D1 TRAPFLGB
AND,R2 D1
SLD,D1 8
AND,D1 M7
    
```

CHK BAD CAL BIT  
 NO BRANCH  
 SET BAD CAL BIT

Address	Op	Op Code	Op Desc	Op Type	Op Name	Op Desc	Op Desc
H01 1292	01	002B8	20D00000	A	AI,D2	0	
1293	01	002B9	481002BB		BGE	MTRAP4	NR, BRANCH
1294	01	002BA	49C00008	N	BR,D1	X80	SET BAD CAL BIT
1295	01	002BB	25C00000	N	EQU	\$	
1296	01	002BB	25C00000	N	SLS,D1	TRAPFLGB	
1297	01	002BC	4920000C	A	BR,R2	D1	
1298	01	002BD	352A0000	X	STW,R2	TRPFLAGS,R5	
1299						TRAPFLAG RESTORED WITH NEW SET AND RESET OPTIONS,	
1300	01	002BE	72C0000D	A	LB,D1	D2	
1301	01	002BF	25C00010	A	SLS,D1	16	
1302	01	002C0	25C00104	A	SLD,D1	4	
1303	01	002C1	48C00000	X	AND,D1	Y003	
1304	01	002C2	48D00000	X	AND,D2	Y003	
1305	01	002C3	48D00020	N	EBR,D2	M32	
1306	01	002C4	48E0000D	A	AND,D3	D2	
1307	01	002C5	49E0000C	A	BR,D3	D1	
1308	01	002C6	95E00001	A	STD,D3	*R1	
1309	01	002C7	25E00278	A	SCS,14	*8	
1310	01	002C8	32600000	X	LW,6	JITCB	
1311	01	002C9	69300000	X	BNEZ	TRAPEXIT	
1312	01	002CA	32600005	N	LW,6	TSTACK+5	
1313	01	002CB	35600000	X	STW,6	JITCB	
1314	01	002CC	68000000	X	B	TRAPEXIT	
1315	01	002CD	32CC0000	A	RSTRTRAP LW,D1	0,R6	
1316	01	002CE	322C0001	A	LW,R2	1,R6	
1317	01	002CF	2231FFFF	A	LI,R3	X11FFFF1	
1318	01	002D0	472A0000	X	STS,R2	USRENT,R5	USRENT
1319	01	002D1	32D00000	X	LW,D2	Y01FE	
1320	01	002D2	47CA0000	X	STS,D1	TRPFLAGS,R5	OLD FLAGS
1321	01	002D3	55C0000C	A	STH,D1	D1	
1322	01	002D4	32D00000	X	LW,D2	Y003	
1323	01	002D5	47C0000E	A	STS,D1	D3	DM,DM
1324	01	002D6	680002C6		B	MTRAPX	

```

1326
1327
1328
1329 01 002D7 72000000 X
1330 01 002D8 210000C0 A
1331 01 002D9 681002DB
1332 01 002DA 68000155
1333 01 002DB 32700000 X
1334 01 002DC 207FFFEF A
1335 01 002DD 22000000 A
1336 01 002DE 32100018 N
1337 01 002DF 92200007 A
1338 01 002E0 47000002 A
1339 01 002E1 22300000 A
1340 01 002E2 95200007 A
1341 01 002E3 22C00000 N
1342 01 002E4 22D00000 N
1343 01 002E5 22E00000 N
1344 01 002E6 02200030 A
1345 01 002E7 28CE000A A
1346 01 002E8 6800014F
1347
01 002E9 010000A3 A
01 002EA FF01FFFF A
    
```

```

*
* MISYS CAL PROCESSOR
*
TISYS LB,0 JB:PRIV
CI,0 X:COI
BGE SYS2
B CC1SET
Sys2 LW,7 TSTACK
AI,7 *17
LI,0 0
LW,1 Y008
LD,2 *7
STS,0 2
LI,3 0
STD,2 *7
LI,12 QUEUE
LI,13 QUEUE1
LI,14 NEWQ
LCI 3
STM,12 10,7
B CCORST
END
    
```

MUST HAVE 'CO' OR GREATER  
NO GO RETURN

COMPUTE ADDR OF PSD IN STACK

LOAD THE PSD  
SET MASTER MODE  
AND 0 WRITE KEY  
PUT THE MASTER PSD BACK

STORE ADDRESSES OF I/O ROUTINES  
IN USER REGS 8,9, AND 10

CONTROL SECTION SUMMARY: 01 002EB PT 0

ABA/00000004  
ACS/00000005  
ASN/00000000  
BAATNGC/00000007  
BACSC/00000038  
BADEVTP/00000006  
BAFILDISP/0000002C  
BAKEYM/00000030  
BAORG/00000017  
BASCR/00000044  
BAT/00000100  
BBUD/00000010  
BLINK/00000000  
BUFF1/00009400  
BUF1/FUNC  
CALMUL1/01 00116  
CAL15/01 0007C  
CAL17/01 000D8  
CCBD/00000004  
CFU/00000001  
CKLM1/01 00295  
CSC/0000000E  
CYL/00000000  
C17TV/01 000E5  
C19TV/01 00027  
DCBN8SEPBIT/00000200  
DCBS/00002000  
DIR/00000000  
DSC/00000013  
D3/0000000E  
ERA/00000003  
EXUERR3/01 00004  
EXU17/01 00092  
FCD/00000000  
FILDISP/0000000B  
FLINK/00000001

ACD/00000015  
AGV/00000000  
ATINyAT/00000005  
BAAVRNB/00000005  
BACVI/00000024  
BADSc/0000004c  
BAFUNM/00000002  
BALVA/00000029  
BAVc/0000002D  
BASLIDES/00000003  
BAVDCTX/00000028  
BCDA/0000000F  
BLK/00000006  
BUFF2/00009600  
BUF1MSK/0000001F  
CALMUL2/01 00119  
CAL16/01 000BF  
CAL18/01 000F3  
CC3SET/01 00151  
CFUPRIVBIT/00010000  
CLK/0000000C  
CVA/00000014  
C1TV/01 0000D  
C17TVEND/0000000E  
DCBCDAM/00000015  
  
DCBSWXVBIT/00008000  
DISCBPR8C/00000000  
DSI/00000001  
D4/0000000F  
EXT/00000000  
EXUC8DE/00000028  
EXU18/01 00097  
FCN/00000007  
FIL1/00000005  
FLP/00000006

ACNDISP/00000009  
ANSPR8C/00000000  
ATCYLBIT/00008000  
BACIS/0000002C  
BACV8/00000024  
BADSI/00000007  
BAHSC/00000050  
BANLR/00000015  
BARAX/00000015  
BASPARE/0000004F  
BAVNB/0000002C  
BFL/00000010  
BTD/00000000  
BUFSIZ/00000800  
BUF2/FUNC  
CAL13/01 0006A  
CAL16X/01 000C5  
CAL19M8D/01 00057  
CDA/00000008  
CIS/0000000B  
CMD/00000014  
CVI/00000009  
C14TV/01 00075  
C18A/01 00113  
DCBCYLBIT/00020000  
DCBPRIVBIT/00000800  
DELA/00000400  
DPADFDA/00010002  
D1/0000000C  
EGV/00000000  
EXUERR1/01 00002  
EXU8K/01 00088  
EXU19/01 00099  
FC8N/00000000  
FLD/00000015  
FNEMAX/00000020

ACNMAX/0000000C  
ARS/00000004  
ATPRIVBIT/00004000  
BAC8S/0000002C  
BADCAL/01 00233  
BAFCN/0000001c  
BAIMT/00000038  
BANRA/00000008  
BARNDDEV/00000016  
BASVA/0000004D  
BAVSND/00000024  
BITS/00000001  
BUF/00000002  
BUFX/00000009  
BUF2MSK/000003E0  
CAL14/01 00070  
CAL16Y/01 000C8  
CBD/00000012  
CDAM/00000002  
CKLIM8K/01 0029D  
C8S/0000000B  
CV8/00000009  
C16TV/01 000cD  
C18TV/01 000F5  
DCBL88P/01 00044  
DCBPR8C/00000000  
DIc/00000040  
DPDFDA/00010004  
D2/0000000D  
E8P/00000000  
EXUERR2/01 00003  
EXU15/01 0008C  
FBL88P/01 0004E  
FDA/00000001  
FLG;LIC/00000800  
FPARAM/0000000B

FRM/00000000  
 GAVAL/00000003  
 HAFLD/0000002B  
 HICAL18/0000001D  
 IMT/0000000E  
 KAD/00000012  
 KR02/01 00137  
 LRDLO/0000004E  
 MASTERC0DE/00000008  
 MEXU/01 00083  
 MLNK/01 00239  
 M0NPR0C/00000001  
 MSEGLEX/01 00271  
 MTRAP/01 0029F  
 MTRTN/01 0015C  
 M10/0000000A S  
 M14/0000000E S  
 M18/00000012 S  
 M21/00000015 S  
 M25/00000019 S  
 M29/0000001D S  
 M32/00000020 S  
 M7/00000007 S  
 NAVX/00000002  
 NLR/00000005  
 NRA/00000002  
 NXTBLK/01 00265  
 0PC0DES/00010003  
 PAT/00000011  
 PRIV/00000000  
 RESBURCE/01 0012A  
 RST0RE/00000014  
 RTR/00000001  
 R10/0000000A  
 R14/0000000E  
 R4/00000004  
 R8/00000008

FSP/00000007  
 HAACD/0000002A  
 HAPBD/00000029  
 HLC/00000013  
 INIT/00000000  
 KBUF/0000000A  
 KR04/01 0012E  
 LSLIDES/0000004D  
 MAXACN/00000010  
 MFSI/01 00281  
 MLNK1/01 00244  
 MPBITS/00000000  
 MSTRSLV/01 000AB  
 MTRAPX/01 00206  
 MTRTNOA/01 0017A  
 M11/0000000B S  
 M15/0000000F S  
 M19/00000013 S  
 M22/00000016 S  
 M26/0000001A S  
 M3/00000003 S  
 M4/00000004 S  
 M8/00000008 S  
 NC14S/00000007  
 N0PAD/01 0026A  
 NVA/00000008  
 NXTF/00000005  
 0PTBL/01 00006  
 PBD/00000014  
 QBUF/00000007  
 RLIM/00000015  
 RSTRTRAP/01 002CD  
 RWS/0000000D  
 R11/0000000B  
 R15/0000000F  
 R5/00000005  
 R9/00000009

FUN/00000001  
 HACCBD/00000008  
 HASND/00000019  
 HSC/00000014  
 INTRTN/01 00033  
 KEYM/0000000C  
 KR05/01 00133  
 LVA/0000000A  
 MBG/00000000  
 MIDIS/0000000C  
 M0D/00000000  
 MSC0DES/01 00000  
 MSTRUNC/01 00042  
 MTRAP2/01 002B3  
 MTRTNOB/01 00184  
 M12/0000000C S  
 M16/00000010 S  
 M2/00000002 S  
 M23/00000017 S  
 M27/0000001B S  
 M30/0000001E S  
 M5/00000005 S  
 M9/00000009 S  
 NC16S/0000000B  
 N0SEP/00000000  
 NWK/00000005  
 BK0UT/01 0014F  
 0RG/00000005  
 P0K/00000000  
 RAX/00000005  
 RNDEV/00000005  
 RSZ/00000003  
 R0/00000000  
 R12/0000000C  
 R2/00000002  
 R6/00000006  
 SCCSTRP/01 00056

FVA/00000014  
 HACMD/00000028  
 HICAL/00000009  
 HWDSI/00000003  
 JIC/000000200  
 KR01/01 00142  
 LDA/00000007  
 MASI/01 00285  
 M0BUPLE/01 00248  
 MIUD/00000010  
 M0NBVLY/01 00025  
 MSEGLD/01 0024C  
 MS1/01 000BA  
 MTRAP4/01 002BB  
 M1/00000001 S  
 M13/0000000D S  
 M17/00000011 S  
 M20/00000014 S  
 M24/00000018 S  
 M28/0000001C S  
 M31/0000001F S  
 M6/00000006 S  
 NAV/00000004  
 NC19S/0000000C  
 N0U/00000000  
 NXTA/00000010  
 0NWK/00000005  
 0VC/0000000B  
 PPSWP/00000010  
 RDLO/0000004C  
 RNR/00000010  
 RYCHKERR/01 00278  
 R1/00000001  
 R13/0000000D  
 R3/00000003  
 R7/00000007  
 SCFU/00000004

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SCR/00000011  
 SEG30/01 00270  
 SLAVEC0DE/00000007  
 SR1/00000008  
 STKT0TMP/01 00221  
 SYS2/01 002DB  
 T:SYSL0AD/01 0027A  
 TIC/00000080  
 TQ0V2END/00000006  
 TRAP40/01 0020F  
 TRN/00000005  
 ULB/0000000C  
 VDCTX/0000000A  
 VT0C:BITMAP/00000007  
 VT0C:SNTP/00000003  
 WXBUFSIZ/00000100  
 XXTRUNC/01 0004C  
 X1000/0000000D S  
 X2000/0000000E S  
 X4000/0000000F S  
 X8000/00000010 S  
 Y0008/00000014 S  
 Y008/00000018 S  
 Y08/0000001C S  
 Y8/00000020 S

\* EXTERNAL DEFINITIONS

ALTCP/01 00000  
 CC1RST/01 0014F  
 MSTRAPXIT/01 001B7  
 RTERR/01 00005

\* PRIMARY REFERENCES

AB0RT BT31T00  
 CNMPR0C0# CNMPR0C1#  
 E:AP ECBCHECK  
 J:DCBLINK J:EXTENT  
 J:USENT JBICUR  
 LDLNK# LDLNKSE0

SCR7C/01 00128  
 SEQ/00000005  
 SN0/0000000c  
 SR2/00000009  
 STKT0T10/01 00227  
 S69PR0C/00000001  
 TAB1/0000000F  
 TLB/0000000E  
 TRAP10/01 001D1  
 TRAP40A/01 0021B  
 TTL/00000000  
 USER00/01 00036  
 VFC/00000000

WAT/00000000  
 XBUFSIZ/00000400  
 X1/00000001 S  
 X2/00000002 S  
 X4/00000003 S  
 X8/00000004 S  
 Y0001/00000011 S  
 Y001/00000015 S  
 Y01/00000019 S  
 Y1/0000001D S  
 40SUBS/01 00217

CALBAD/01 00234  
 CC1SET/01 00155  
 MTRTNO/01 00165  
 TMPT0STK/01 00186

SEGLD0/01 00256  
 SID/00000015  
 SOS/00000014  
 SR3/0000000A  
 SVA/00000013  
 TICLRERR/01 0011c  
 TCFU/0000000F  
 T0F/00000000  
 TRAP28/01 00205  
 TRAP40B/01 0021E  
 TYC/00000002  
 USR/00000000  
 VN0/0000000B  
 VT0C:MAPWL/00000004  
 WFNEMAX/0000000B  
 XFFDF/00000006 S  
 X10/00000005 S  
 X20/00000006 S  
 X40/00000007 S  
 X80/00000008 S  
 Y0002/00000012 S  
 Y002/00000016 S  
 Y02/0000001A S  
 Y2/0000001E S

CALCK/01 0000A  
 CC2SET/01 00153  
 0UT/01 00156  
 40TRAP/01 001C4

C:ETM  
 CNMPR0C3#  
 FF3FFFFF  
 J:PLL  
 JB:PRIV  
 MASKS  
 C:RT90  
 CNMPR0C4#  
 J:ABC  
 J:RNST  
 JB:STEPCC  
 MINT#

SEGLD1/01 0025F  
 SJAC/00001000  
 SREC/00000006  
 SR4/0000000B  
 SWXV/00000000  
 T:SYS/01 002D7  
 TDA/00000005  
 T0PMSK/00007C00  
 TRAP30/01 00209  
 TREEBAD/00000001  
 UFLAGS/00000001  
 UTSPR0C/00000001  
 VSND/00000009  
 VT0C:NVAT/00000005  
 WRDL0/00000013  
 XFFFE/00000001 S  
 X100/00000009 S  
 X200/0000000A S  
 X400/0000000B S  
 X800/0000000C S  
 Y0004/00000013 S  
 Y004/00000017 S  
 Y04/0000001B S  
 Y4/0000001F S

CC0RST/01 0014F  
 CKLIMIT/01 00288  
 RTCHK/01 00274

CCL0SE#  
 DEBUGSEG  
 J:ALB  
 J:TCB  
 JBF0FP  
 MISOVSEG  
 CHKPR0T  
 DELTAG0  
 J:BASE  
 J:TELFLG  
 [DEV#  
 MPP0

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MSTIMER# MSTRAP#  
NEWQ P:NAME  
QUEUE1 RCVPSD  
S:RTCORE SBIRTY  
SPPBASE SVIRSIZ  
T:ASSOCIATE#  
T:DISASSOCIATE#  
T:FSI# T:FVP  
T:GVP T:IACU  
T:OVERLAY T:PAC  
T:SAVEGET# T:SELFDESTRUCT  
T:INTERLOG# TEMP  
TRNC TRPFLGS  
UH:FLG2 USRENT  
YE Y003

MTIME#  
PBILCT  
RMAOVSEG  
SCR61  
T:ABORT  
T:BLIST#  
T:IDOPEN#  
T:IGBUF  
T:INITJOB  
T:PROCOV  
TQOV1SEG  
TSTACK  
XCONSETUP  
Y003E

MTTIMER#  
PBILNK  
RTICBHDR  
SEGLD#  
T:ABORTM  
T:CHTBL#  
T:ERROR  
T:GCP  
T:LOCK#  
T:RBUF  
T:SMP  
TQOV2SEG  
UBIAPR  
XFFFF  
Y01FE

MULSEG  
PBIPSZ  
SICUIS  
SHIRBCU  
TIACCTEX  
TICOUPL#  
TIEXIT  
TIGDDL#  
TIMAP#  
TIRDERLOG#  
TISSEM  
TQUEUE#  
UB:ASP  
XFF00

MXCON#  
PBIUC  
S:CUN  
SHIRNM  
T:ASI#  
T:DCLOSE#  
T:FCP  
T:GDP  
T:MODPRTRT#  
T:REG  
TIUTSXTS  
TRAPEXIT  
UB:DB  
XN2

NB31T80  
QUEUE  
S:MBSF  
SPDBASE  
T:FDP  
T:IGL  
T:OVER  
T:ISAD  
T:WAIT#  
TRAPFLGB  
UH:FLG  
X1FFFE

\* SECONDARY REFERENCES  
RTALTCP RTINTRTN  
\* NO UNDEFINED SYMBOLS  
\* ERROR SEVERITY LEVEL: 0  
\* NO ERROR LINES

T:GETID

TTP