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1                   ;***COPYRIGHT 1969, DIGITAL EQUIPMENT CORP., MAYNARD, MASS.***
2
3
4                   ;THIS SUB-PROGRAM ASSEMBLED WITH SYSTEM PARAMETER FILE - S,MAC(V414)
5                   XLIST
6                   LIST
7                   TITLE DCSINT - INT. SERV. FOR DATA COMMUNICATION SYSTEM 630 - V402
8                   SUBTTL M. FREDRIKSEN/TH/CHW TS 7 MAY 69
9                   XP       VDCSIT,402*
10                               ;PUT VERSION NUMRER IN GLOB LISTING AND LOADER STORAGE M&P
11
12                   ;MODULAR HARDWARE INTERFACE WITH EITHER SCNSER OR TTYSER
13
14                   EXTERNAL SCNON,SCNOFF,TYPX
15
16                   IFE FTTYSER,<XP FULTWX,200000>
17
18                   IFN FTTYSER,<XP FULTWX,4>*
19
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;ACCUMULATOR ASSIGNMENTS

20
21
22 000010 CHREC=TEM ;AC FOR CHARACTER
23 000006 DDR=DEV DAT ;ADDRESS OF DEVICE DATA BLOCK
24 000002 LINE=TAC1 ;SCANNER LINE NUMBER
25 000005 HPOS=DAT ;HORIZONTAL POSITION OF TTY.(0-71)
26
27 ;BYTE POINTERS
28
29 EXTERNAL PLASTC
30

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31 ;DEVICE DEPENDENT PORTION OF INITIALIZATION CODE
32 ;CALL: MOVEI TAC,CHANNEL NUMBER
33 ; PUSHJ PDP,SCNINI
34
35 INTERNAL SCNINI
36
37 000000 DCSINI:
38 000000 201040 100000 SCNINI: MOVEI TAC,100000
39 000001 730200 004010 CONO DCSA,4010 ;RELEASE XMITTER, RECEIVER
40 000002 730300 001000 CONSZ DCSA, 1000
41 000003 730200 004000 CONO DCSA, 4000
42 000004 730300 000010 CONSZ DCSA, 10
43 000005 730440 000002 DATAI DCSB, TAC1
44 000006 367040 000002 SOJG TAC,,-4
45 000007 730200 000000 CONO DCSA,FSNCHN ;ASSIGN INTERRUPT CHANNELS
46 000010 263140 000000 POPJ PDP,
47
48 ;SCANNER INTERRUPT SERVICE ROUTINE,
49
50 ENTRY DCSINT
51
52 INTERNAL SCNINT
53 EXTERNAL SCNSAV,TCONLN,TTYTAB,XMTINT,TYPE,INUS2,RECINT,FSNCHN
54
55 000011 DCSINT:
56 000011 730340 001010 SCNINT: CONSO DCSA,1010
57 000012 254000 000011 JRST SCNINT
58 000013 264000 000000 JSR SCNSAV
59 000014 730340 000010 CONSO DCSA,10 ;RECEIVER FLAG?
60 000015 254000 000036 JRST SCNINI ;NO,XMITTER FLAG
61 000016 730640 000002 CONI DCSB,LINE ;SCANNER INPUT,
62 000017 730440 000010 DATAI DCSB, CHREC
63 000020 301100 000000 CALL LINE,TCONLN ;ARE WE ENABLED FOR THIS LINE NUMBER?
64 000021 263140 000000 POPJ PDP, ;NO, DISMISS INTFRRUPT
65 000022 254000 000000 JRST RECINT ;RECEIVER INT, HANDLER

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56                                     :COMMON PARTS OF CTY AND SCANNER INTERRUPT SERVICE ROUTINES,
57
58                                     EXTERNAL INJEST,DDRSRC
59                                     INTERNAL TCOMM
60
61                                     TCOMM:
62 000023                               SKIPE DDR,TTYTAB(LINE) :DATA BLOCK ASSIGNED?
63 000024 332372 000000                JRST INUSE                :YES
64 000025 254070 000042                PUSHJ PDP,DDRSRC        :SEARCH FOR FREE TTY DEV. DATA BLOCK
65 000026 260140 000000                JRST TYPX              :NONE FOUND, TYPE X
66 000027 201240 000000                MOVEI WPOS,0           :ASSUMF TTY IS AT BEGIN OF FORM
67 000030 303120 000020                CAIE LINE,TCONLN      :PSEUDO CONSOLE?
68 000031 254070 000000                JRST INJEST           :YES
69 000032 302170 000030                CAIE LINE,TCONLN      :IS IT CTY?
70 000033 730340 000700                CONSO DCSA,700        :NO, IS IT HALF DUPLEX?
71 000034 254070 000000                JRST INUS2            :YES, ACCEPT CHAR AND PROCESS
72 000035 254070 000000                JRST TYPE             :NO, ECHO CHAR ON FULL DUPLEX
73                                     :BEFORE PROCESSING IT
74
75                                     SCNIN1:
76 000036 730040 000002                DATA DCSA,LINE       :GET LINE NO. FROM FULL DUPLEX.
77 000037 201040 000077                MOVEI TAC,FSNCHN
78 000040 730221 004070                CCNC DCSA,4000(TAC)   :RELEASE XMITTER SCANNER
79 000041 254070 000070                JRST XMTINT           :IN SCNSER OR TTYSER
  
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90                                     ;COMMON TO RECEIVE AND TRANSMIT.
91
92 000042 553070 000076 INUSE: HRR7S DDR           ;LINE DISABLED IF RH TTYTAB=-1
93 000043 306370 777777      CAIN DBB,-1
94 000044 263140 000000      POPJ POP,
95 000045 200076 000072      MOVE IOS,DEVIOS(DDR)      ;SETUP IOS
96 000046 305170 000032      CAIGE LINE,ICONLN      ;CTY OR PTY?
97 000047 730340 000700      CONSO DCSA,700        ;NO, HALF DUPLEX?
98 000050 254070 000034      JRST INUS2           ;YES
99 000051 603070 000004      TLNE IOS,FULTWX      ;IS THIS SELF ECHOEING FULL DUPLEX?
100 000052 254070 000050      JRST INUS2           ;YES,(USER TYPED CONTROL R)
101 000053 730672 000000      CONO DCSB,(LINE)     ;FULL DUPLEX SCANNER, ECHO CHAR.
102 000054 730140 000010      DATA DCSA,CHRFC
103 000055 137470 000000      DPB CHREC,PLASTC
104 000056 263140 000000      POPJ POP,           ;DISMISS INTERRUPT

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105 ;ROUTINE TO OUTPUT A CHARACTER ON A LINE
106 ;CALLED FROM TYP OR TYPL IN SCNSFR
107
108 INTERNAL SCNTYP
109
110 000057 SCNTYP:
111 000057 700600 000000 DCSTYP: CONO PI,SCNOFF ;TURN SCANNER PI OFF IN CASE AT USER LEVEL
112 ;SO NO INTERRUPTS BETWEEN CONO, AND DATA
113 000060 730672 000000 CONO DCSR,(LINE) ;NO
114 000061 730140 000010 DATA DCSA,CHREC ;NO
115 000062 700600 000000 CONO PI,SCNON ;TURN SCANNER PI BACK ON
116 000063 332000 000006 SKIPE DDR
117 000064 137400 000055 DPR CHREC,PLASTC ;SAVE CHAR FOR FULL DUPLEX
118 000065 263140 000000 POPJ POP,
119
120
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DCSINT - INT. SERV. FOR DATA COMMUNICATION SYSTEM 630 - V402 MACRO,V36 19:03 4-JUN-69 PAGE 19
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END

NO ERRORS DETECTED

PROGRAM BREAK IS 000266

CHREC	000010						
DCSINT	000011' INT	DAT	000025	INT	DCSINI	000000'	
DDRSRC	000025' EXT	DCSTYP	000057'		DDR	000006	
FSNCHN	000037' EXT	DEVDAT	000026	INT	DEVIOS	000002	INT
HPOS	000025	FTTTYS	777777		FULTWX	000004	INT
INUSF	000042'	INJEST	000031'	FXT	INUS2	000052'	FXT
PDP	000023 INT	IGS	000020	INT	LINE	000002	
SCNIN1	000036'	PLASTC	000044'	FXT	RECINT	000022'	FXT
SCNOFF	000057' EXT	SCNINI	000000'	INT	SCNINT	000011'	INT
SCNTYP	000057' INT	SCNCN	000062'	FXT	SCNSAV	000013'	FXT
TCOMM	000023' INT	TAC	000001	INT	TAC1	000002	INT
TTYTAB	000023' EXT	TCONLN	000046'	FXT	TEM	000010	INT
VDCSIT	000042 INT	TYPE	000035'	FXT	TYPX	000026'	FXT
		XMTINT	000041'	FXT			

DLK	6#	6	
DMT	6#	6	
DNAERR	6#	6	
DOU	6#	6	
DR	6#	6	
DRL	6#	6	
DRN	6#	6	
DSER	6#	6	
DSI	6#	6	
DSKRLB	6#	6	
DSO	6#	6	
DVAVAL	6#	6	
DVCDR	6#	6	
DVDIR	6#	6	
DVDIRI	6#	6	
DVDIS	6#	6	
DVDSK	6#	6	
DVDTA	6#	6	
DVIN	6#	6	
DVLNG	6#	6	
DVLPT	6#	6	
DVMTA	6#	6	
DVOUT	6#	6	
DVPTP	6#	6	
DVPTR	6#	6	
DVTTY	6#	6	
ENTRP	6#	6	
FBMERR	6#	6	
FNERR	6#	6	
FRGSEG	6#	6	
FSNCHN	45	53	87
FT2REL	6#		
FTATTA	6#		
FTCHEC	6#		
FTFXAM	6#		
FTFINI	6#		
FTGETT	6#		
FTHALT	6#		
FTKCT	6#		
FTMONP	6#		
FTPRV	6#		
FTRA10	6#		
FTRCHK	6#		
FTREAS	6#		
FTSLFE	6#		
FTTALK	6#		
FTTIME	6#		
FTTRAC	6#		
FTTRPS	6#		
FTTYS	6#	16	18
FULTX	19#	19	99
HPOS	24#	76	
HSAMSK	6#	6	

MEDDLE	6#	6						
NECERR	6#	6						
NLEERR	6#	6						
NSDEERR	6#	6						
NSFERR	6#	6						
NSHF	6#	6						
NSRRIT	6#	6						
NSWP	6#	6						
NXY	6#							
OBUFR	6#	6						
OCLOSB	6#	6						
OUTBFR	6#	6						
OUTPR	6#	6						
PDP	6#	6	46	64	74	94	114	118
PI	111	115						
PLASTC	29	123	117					
POV	6#							
PROG	6#	6						
PRTERR	6#	6						
PVSPYA	6#	6						
PVSPYM	6#	6						
PVTRPS	6#	6						
RECINT	53	65						
RENMR	6#	6						
RUN	6#	6						
RUNARL	6#	6						
RUNMSK	6#	6						
SCNINI	60	85#						
SCNINI	35	38#						
SCNINT	52	56#	57					
SCNOFF	14	111						
SCNON	14	115						
SCNSAV	53	58						
SCNTYP	108	110#						
SD	6#	6						
SHF	6#	6						
SHRSEG	6#	6						
SLEVFL	6#	6						
SLICE	6#	6						
SNA	6#	6						
SPYSEG	6#	6						
STOPIO	6#	6						
STTYR1	6#	6						
STTYRF	6#	6						
SWP	6#	6						
SWPCLR	6#	6						
SYSDEV	6#	6						
TAC	6#	6	38	44	87	88		
TACL	6#	6	23	43				
TCOMM	69	71#						
TCONLN	53	63	77	79	96			
TEM	6#	6	21					
TRNERR	6#	6						

TTYATC	6#	6
TTYBIU	6#	6
TTYTAB	53	72
TTYUSE	6#	6
TYPE	53	82
TYPX	14	75
UCHN	6#	6
UIOMOD	6#	6
USRMOD	6#	6
UUO	6#	6
UWP	6#	6
UWPOFF	6#	6
VDCSIT	10#	10
WTMASK	6#	6
XMTINT	53	89

CODES	6#			
DISARL	6#			
ENABLE	6#			
NOSCHE	6#			
NOSHUF	6#			
QUEUES	6#			
SCHEDU	6#			
SHUFFL	6#			
STARTD	6#			
XP	6#	6	9	18