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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 PTRSER - PAPER TAPE READER SERVICE ROUTINE FOR BOTH PDP-6 AND PDP-10
8          SURTTL /GRH/TNM TS 14 APR 69 V004
9          XP          VPTRSR,004+
10         ;PUT VERSION NUMBER IN GLOB LISTING AND LOADER STORAGE MAP
11         EXTERNAL STOSQD, ILLOUT
12         EXTERNAL ST00AT, IOSET, SETBYT, ADVBFF
13         EXTERNAL SETI0D, PTRSAV, PTRCHN,PIOMOD
14         EXTERNAL SETACT,STOIOS,CPOPJ1,PTRMSK
15         INTERNAL PTRINT,PTRDSP
16
17         ;PTR DEVICE DATA BLOCK LINKAGE
18
19
20
21
22
23         ENTRY PTRSER
24         PTRSER:
25
26
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27      ,PARAMETER ASSIGNMENTS
28      , PTR CONTROL REGISTER
29      000010      PTRDN=10      ;DONE FLAG
30      000020      PTRBSY=20     ;BUSY FLAG
31      000040      PTRBIN=40     ;BINARY READ MODE
32      000040      POW=40       ;POWER, ON=1
33
34      , SPECIAL IO STATUS WORD ASSIGNMENTS
35      400020      TDISC=400020
36      200020      TRFCI=200020
37      100020      TRPOW=100020
38      , SPECIAL ASCII CHARACTERS
39      000177      RUPRNT=177
40
41
42      INTERNAL FTCHK,FTMONP
43      IFN FTCHK+FTMONP,<
44      EXTERNAL PTRDR,PTRIOS,PTRADR,PTRPTR,PTRCTR,PTRSVC,PTRSV1,PTRCON
45      >
46      IF FTCHK+FTMONP,<
47      ;PTR DEVICE DATA BLOCK
48      INTERN PTRDB
49
50      000000      PTRDB:
51      000000 606462 000000      PTRDAT: SIXBIT /PTR/
52      000001 000036 000041      XWD *D30*HUNGST,41
53      000002 000020 000000      PTRIOS: ?
54      000003 000000 000017      EXP PTRDSP
55      000004 000022 014403      XWD DVPTR*DVIN,14403
56      000005 000000 000000      ?
57      000006 000000 000000      ?
58      000007 000007 000000      PTRADR: XWD PROG,0
59      000010 000000 000000      PTRPTR: 0
60      000011 000000 000000      PTRCTR: ?
61      000012 000000 000000      PTRSVC: ?
62      000013 000000 000000      PTRSV1: ?
63      000014 000000 000000      PTRCON: ?
64      >
  
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65  
66  
67                           ,PTR SERVICE DISPATCH TABLE  
68 000015 254000 000145'       JRST PTRINI       ;INITILIZE  
69 000016 254000 000145'       JRST PTRREL       ;HUNG DEVICE TIME-OUT ERROR,  
70 000017 254000 000145' PTRDSP: JRST PTRREL       ;RELEASE  
71 000020 263140 000000       POPJ PDP,       ;CLOSE  
72 000021 254000 000000       JRST ILLOUT       ;OUTPUT
```

73	000022	607000	000002	TLNN IOS,IOBEG	INPUT, VIRGIN DEVICE?
74	000023	254000	000032	JRST PTRIN1	INO
75	000024	661000	000004	TLO IOS,IOFST	IOFST:=1, NEXT ITEM WILL BE FIRST ITEM OF A BUFFER
76	000025	621000	700000	TLZ IOS,PTRPOW+PTRFCI+IODISC	
77	000026	260140	000000	PUSHJ PDP,SETBYT	ITAC0-5:=TAC12-13:=0,TAC6-11:=BYTE SIZE
78					ITAC14-17:=PRDG
79	000027	202040	000010	MOVEM TAC,PTRPTR	IPTRPTR:=C(TAC)
80	000030	710700	000400	CONSZ PTR,POW	IS POWER ON?
81	000031	661000	100000	TLO IOS,PTRPOW	YES, PTRPOW:=1
82	000032			PTRIN1:	
83	000032	201100	000020	MOVEI TAC1,PTRBSY	
84	000033	627000	000002	TLZN IOS,IOBEG	VIRGIN?
85	000034	201100	000010	MOVEI TAC1,PTRDON	INO
86					
87	000035	607000	100000	TLNN IOS,PTRPOW	
88				ANDI TAC1,PTRMSK	PTRMSK IS DEFINED IN BUILD AS -1 PDP-6 AND 0 P
89	000036	405100	000000	DP-10	
90	000037	260140	000000	PUSHJ PDP,SETACT	IOACT:=1
91	000040	201042	000000	MOVEI TAC,PTRCHN(TAC1)	
92	000041	135100	000000	LDR TAC1,PIOMOD	
93	000042	302100	000013	CAIE TAC1,IB	IMAGE BINARY?
94	000043	306100	000014	CAIN TAC1,B	OR BINARY?
95	000044	435040	000040	IORI TAC,PTRBIN	
96	000045	505040	000010	HRLI TAC,PTRDON	
97				STARTDV PTR+EXTERNAL PIOFF,PION	
98	000046	700600	000000	CONO PI,PIOFF	
99	000047	710601	000000	CONO PTR,(TAC)	
100	000050	546040	000014	HLRM TAC,PTRCON	
101	000051	700600	000000	CONO PI,PION	
102	000052	263140	000000	POPJ PDP,	

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103
104 000053 710760 000014' PPRINT: CONSO PTR,@PTRCON
105 000054 254000 000053' JRST PPRINT
106 000055 331000 000002' SKIPL PTRIOS ;DISCONNECT REQUEST? (IODISC=1?)
107 000056 710440 000013' DATAI PTR,PTRSV1 ;PTRSV1:=DATA ITEM,
108 000057 264000 000000' JSR PTRSAV ;SAVE ACCUMULATORS AND ESTABLISH PDP
109 000060 201300 000000' MOVEI DEVDAT,PTRDOB ;SET UP DEVDAT
110 000061 260140 000000' PUSHJ PDP,IOSET ;PROG:=C(JRTADR18-35),ITEM:=C(DEVCTR)
111 ;IOS:=C(PTRIOS)
112 000062 200240 000013' MOVE DAT,PTRSV1 ;DAT:=DATA ITEM
113 000063 710740 000400' CONSO PTR,POW ;PTR POWER ON?
114 000064 254000 000113' JRST PTREND ;NO
115 000065 667000 100000' TLOI IOS,PTRPOW ;PTRPOW=1? PTRPOW:=1
116 000066 254000 000143' JRST PTREX1 ;NO
117 000067 623000 400000' TLZE IOS,IODISC ;DISCONNECT REQUEST?
118 000070 254000 000131' JRST PTREX ;YES
119 000071 623000 200000' TLZE IOS,PTRFCI ;IS PTRFCI=1?
120 000072 200240 000012' MOVEI DAT,PTRSV1 ;YES, DAT:=C(PTRSV1)
121 000073 602000 000014' PTRINW: TRNE IOS,B ;MODE=BINARY?
122 000074 254000 000101' JRST PTRI0 ;YES
123 000075 405240 000177' ANDI DAT,177 ;MASK OUT PARITY BIT
124 000076 306240 000177' CAIN DAT,RUBOUT ;LAST CHAR A RUBOUT?
125 000077 254000 000143' JRST PTRFX1 ;YES
126 000100 322240 000143' JUMPE DAT,PTREX1 ;DAT=0?
127
128 000101 260140 000000' PTRI0: PUSHJ PDP,STODAT ;NO STORE DATA WORD,
129 000102 255000 000000' JFCL ;CHECKSUM ERROR
130 000103 254000 000105' JRST PTRI1 ;BLOCK FULL OR BLOCK COMPLETE
131 000104 254000 000143' JRST PTREX1 ;DATA STORED CORRECTLY.
132
133 000105 260140 000000' PTRI1: PUSHJ PDP,ADVBFF ;ADVANCE BUFFER
134 000106 661000 400000' TLO IOS,IODISC ;NEXT BUFFER IS FULL. IODISC=1
135 000107 661000 000004' PTRI2: TLO IOS,IOFST ;IOFST=1, NEXT ITEM IS FIRST ITEM OF A BUFFER,
136 000110 623000 000001' TLZE IOS,IOW ;IN A WAIT? IOW:=0
137 000111 260140 000000' PUSHJ PDP,SETI00 ;IOWS:=1
138 000112 254000 000143' JRST PTREX1

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139
140
141
142
143 000113 430000 000100' PIREND: TOP IOS, [XWD PTRPWI, IOACT]      ;PTRPWI=2, IOACT=0
144 000114 260140 000145'      PUSHJ PDP, PTRREL      ;CLEAR PTR AND CONSO FLAG
145 000115 135040 000141'      LDR TAG, #IOMOD
146 000116 661000 000142'      TLO IOS, IOEND+IOREG
147 000117 000040 000114'      CAIE TAG, R      ;CHECKSUM BINARY BLOCK MODE?
148 000118 254000 000124'      JRST PTREI      ;NO.
149 000121 600000 000104'      TLN IOS, IOFST      ;IOFST=1?
150 000122 660000 000102'      TRC IOS, IOIMDM      ;NO. BINARY BLOCK INCOMPLETE.
151 000123 254000 000127'      JRST PTR12
152 000124 260140 000100' PTREI:      PUSHJ PDP, STOSD      ;FINISH THIS BUFFER, STORE WORD COUNT
153 000125 255000 000120'      JFCL
154 000126 260140 000105'      PUSHJ PDP, ADVBFF      ;ADVANCE BUFFER
155 000127 255000 000120'      JFCL
156 000130 254000 000127'      JRST PTR12
    
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157
158
159 000131 337000 000007' ,DISCONNECT PTR
160 000132 254000 000135' PTREX: SKIP @PTRADR          ;HOUSE=1?
161 000133 710440 000005'          JRST PTREX0          ;YES.
162 000134 254000 000073'          DATAI PTR,DAT
163
164 000135 710440 000012' PTREX0: DATAI PTR,PTRSVC      ;SAVE LAST DATA WORD FROM PTR
165 000136 423000 000001'          TLZE IOS,IOW      ;JOB IN AN IO WAIT FOR PTR?
166 000137 260140 000111'          PUSHJ PDP,SETIO0   ;YES. WAKE UP JOB
167 000140 260140 000145'          PUSHJ PDP,PTREL    ;CLEAR PTR AND CONSO FLAG
168 000141 661000 200000'          TLO IOS,PTRF01   ;PTRF01:=1
169 000142 620000 010000'          TRZ IOS,IOACT  ;IOACT:=0
170
171 000143 202200 000011' PTREX1: MOVEM ITEM,PTRCTP      ;PTRCTR:=C(ITEM)
172 000144 254000 000000'          JRST STOIOS     ;STORE IOS,RESET HUNG DEVICE
173
174
175
176 000145
177 000145 710600 000000' PTRIN1:
178 000146 513000 000014' PTRREL: CONO PTR,0   ;CLEAR PTR CONTROL
179 000147 263140 000000'          HLLZS PTRCON    ;CLEAR CONSO FLAG
180
181
182 000150 100000 010000'          POPJ PDP,
183
184
185
186
187
188
189
190
191
192 000150 100000 010000'          FND
  
```

NO ERRORS DETECTED

PROGRAM BREAK IS 000151

ADVBFF	000126' EXT	R	000014 INT	CPDPJ1	000022 EXT
DAT	000015 INT	REVDAT	000016 INT	DVIN	000022 INT
QVPTP	000020 INT	FTCHFC	000020 INT	FTMUNP	000022 INT
HUNGST	000041 INT	IB	000013 INT	ILLDUT	000021 EXT
ICACT	012000 INT	IUPBC	000012 INT	IODISC	000022
IOFND	000040 INT	IUFST	000024 INT	IOIMPM	000022 INT
IOS	000040 INT	IUSET	000041 EXT	IOW	000021 INT
ITFM	000014 INT	POP	000033 INT	PIOFF	000046 EXT
PIOMOD	000115 EXT	PION	000051 EXT	POW	000022
PROG	000027 INT	PTPADR	000037 EXT	PTBIN	000040
PTRCY	000020	PTRCHL	000040 EXT	PTCON	000014
PTRCTR	000011	PTRDAT	000028	PTDDB	000000 INT
PTRDON	000010	PTRDSP	000017 INT	PTREI	000124
PTREID	000113	PTREX	000131	PTREX0	000135
PTREX1	000143	PTRECI	000000	PTRI?	000101
PTRI1	000115	PTRI2	000117	PTRI0	000073
PTRI11	000032	PTRI11	000145	PRINT	000053 INT
PTRIOS	000022	PTRMK	000036 EXT	PTRPOW	100000
PTRPTR	000010	PTRFL	000145	PTRSV	000057 EXT
PTRSR	000020 INT	PTRSV1	000013	PTRSVC	000012
RUBOUT	000177	SETACT	000037 EXT	SETBYT	000026 EXT
SETMOD	000117 EXT	STOCAT	000121 EXT	STOIOS	000144 EXT
STOSND	000124 EXT	TAC	000021 INT	TAC1	000022 INT
VPTSR	000014 INT				

A	6#	6						
AC1	6#	6						
AC2	6#	6						
AC3	6#							
ADVRF	12	133	154					
ADEFER	6#	6						
AL	6#	6						
ASSCON	6#	6						
ASSPRG	6#	6						
B	6#	6	94	121	147			
BUPPNT	6#	6						
BUPWRD	6#	6						
CLKR	6#	6						
CLSIH	6#	6						
CLSOHT	6#	6						
CMWB	6#	6						
CORCNT	6#	6						
CPDPJ1	14							
D	6#	6						
DAT	6#	6	112	120	123	124	126	161
DCL	6#	6						
DCLI	6#	6						
DCLD	6#	6						
DCLR	6#	6						
DDI	6#	6						
DDO	6#	6						
DEN	6#	6						
DEVADR	6#	6						
DEVBUF	6#	6						
DEVCHR	6#	6						
DEVCTR	6#	6						
DEVDAT	6#	6	129					
DEVEXT	6#	6						
DEVFIL	6#	6						
DEVIAD	6#	6						
DEVLOS	6#	6						
DEVLOG	6#	6						
DEVMOD	6#	6						
DEVNAM	6#	6						
DEVODD	6#	6						
DEVPPN	6#	6						
DEVPTR	6#	6						
DEVSER	6#	6						
DGF	6#	6						
DHNG	6#	6						
DIN	6#	6						
DINI	6#	6						
DLK	6#	6						
DMT	6#	6						
DNAERR	6#	6						
DOU	6#	6						
DR	6#	6						
DRL	6#	6						

DRP	6#	6		
DSFR	6#	6		
DST	6#	6		
DSKRLB	6#	6		
DS	6#	6		
DVAVAL	6#	6		
DVADR	6#	6		
DVDIP	6#	6		
DVDIP1	6#	6		
DVDIS	6#	6		
DVDSK	6#	6		
DVDTA	6#	6		
DVIN	6#	6	55	
DVLNG	6#	6		
DVLPT	6#	6		
DVMTA	6#	6		
DVOUT	6#	6		
DVPTP	6#	6		
DVPTR	6#	6	55	
DVTTY	6#	6		
ENTRR	6#	6		
FBMERR	6#	6		
FNERR	6#	6		
FRGSCG	6#	6		
FT2REL	6#			
FTATTA	6#			
FTCHFC	6#	42	43	46
FTFXAM	6#			
FTFINI	6#			
FTGETT	6#			
FTHALT	6#			
FTKCT	6#			
FTMONP	6#	42	43	46
FTPRV	6#			
FTRA10	6#			
FTRCHK	6#			
FTREAS	6#			
FTSLEE	6#			
FTTALK	6#			
FTTIME	6#			
FTTRAC	6#			
FTTRPS	6#			
FTTYS	6#			
HSAMSK	6#	6		
HSAPAS	6#	6		
HSASIZ	6#	6		
HUNGCT	6#	6		
HUNGST	6#	6	52	
I	6#	6		
IB	6#	6	33	
IBUFR	6#	6		
ICLDSB	6#	6		
ILLOUT	11	72		

COPE	6#		
DISAB	6#		
FNABE	6#		
NOSCH	6#		
NOSHE	6#		
QUECS	6#		
SCHLU	6#		
SHIFFL	6#	77	
STARTD	6#	6	
XP	6#		9