(5) vdi [#k,]

vdir [#k,] -- x,y relatifs à curs.

```
YVDI: MOVEQ #0,D6          ) ⊗
GAJ11: BSR  DECTMNP
       BEQ  VDI            appel brut
       BSR  DECCRDF
       BNE  GAJ12
       BSR  WINDEXAV  ⊗ [#k,]
       MOVE D3,-(SP)
       BSR  WINDEXAV  [n,] ⊗ opcode=d3
       BRA  GAJ14
GAJ12: BSR  WINDEXAV  ⊗ opcode=d3
VDIB : MOVE UAES,-(SP)
```

↓

[GAJ14]

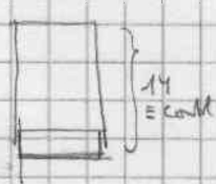
vdir Coord relatives pour ptrin:

```
YVDIR: MOVEQ #-1,D6
       BRA  GAJ11
```

(5) vdi n, - - -

111 N 1 ha

```
VDIB : MOVE   UAES,D0                 ⊗  pas fait
VDIBA: MOVE   D0,-(SP)

~~VDIB : MOVE  UAES,-(SP)~~            graph handle   control[6]
GAJ14: MOVE   D3,D2
       MOVE   D3,-(SP)                 control[5]  (si < 0)
       BPL    MD86
       NEG    (SP)
       MOVEQ  #11,D2
MD86:  SUBQ   #8,SP
       MOVE   D2,-(SP)                 control [0]
       CMP    #40,D3
       BLT    MD88
       SUB    #100,D3
       BCS    ERRAE
       ADD    #40,D3
MD88:  ADD    #10,D3
       CMP    #82,D3
       BCS    ERRAE
       LEA    TVDI,A0
       MOVE.B (A0,D3.W),D3
       BMI    MD89
       MOVE   D3,D2
       LSR    #4,D2
       MOVEQ  #$F,D0                   d2 = nb de ptsin /2     control [1]
       AND    D0,D2                    d3 = nb de intin        control [3]
       AND    D0,D3
       BRA    MD90
MD89:  CLR    D2
       EXT    D3
       MOVEQ  #-1,D4
       SUB    D3,D4
       BEQ    ERRAE
       MOVEQ  #37,D3
       CMP    #5,D4                    control[0]  d2  d3
       BEQ    MD90          →          111      , 0 , 37
       ~~BSR  WVGK~~        (n)                           { MOVEQ #1,D3
                                                            BSR   DECTMNP
                                                            BEQ   MD890
                                                            BSR   WINDEXAV  n 3
                                                            B
MD890: EXG    D2,D3   ⊗
       SUBQ   #2,D4                    control[0]  d2  d3
       BMI    MD90          →          6
                                       7        , n,  0
                                       9
       MOVE   D2,D3
       MOVE   D4,D2                    control[0]  d2  d3
         ↓                             30
       [MD90]                          112        0   n
                            ↓          ...
                                       10         2   n
```

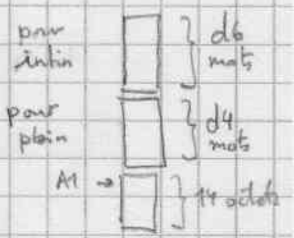


```
MD90: LEA   2(SP),A2

      MOVE  D2,(A2)+            control[1]
      CLR   (A2)+               2
      MOVE  D3,(A2)+            [3]
      CLR   (A2)+               [4]
      ~~ADD D2,D2~~  ⊗
      MOVE  D3,D5
      MOVE.L SP,A1
      MOVEQ #0,D4
      ~~MOVEQ #0,D6~~  <- ⊗ CLR D6
      BRA   MD902
MD900: BSR  ~~DECCRV~~ DECTMN
      ~~BNE~~ BEQ MD91A         -> fin
      BSR   WINDEXAV            <- addq #1,d4
      MOVE  D3,-(SP)
MD902: DBRA D2,MD900
                                <- MOVEQ #0,D6
      BRA   MD906
MD904: BSR  ~~DECTMNP~~         } -> fin
      ~~BEQ MD91A~~
      BSR   WINDEXAV
      MOVE  D3,-(SP)
      ADDQ  #1,D6
                                { BSR PDECTMNP
                                { BEQ MD91A
MD906: DBRA D5,MD904
                                cas chaine ?
      CMP   #8,(A1)             control[0]
      BEQ   MD908               -> oui
      CMP   #116,(A1)
      BEQ   MD908               -> oui
      CMP   #11,(A1)
      BNE   MD910               -> non
      CMP   #10,(A2)            control[5]
      BNE   MD910               -> non
                                ↓ oui

MD908: MOVE.L VDIPB+4,D3        intin
      MOVEM.L D3/D4/D6/A1,-(SP)
      ~~ADD D6,D6~~
      EXT.L D6
      ADD.L D6,D3               <- { MOVE.L D3,-(SP)
                                   { BSR WCHAIN
                                   { MOVE.L (SP)+,A1
                                   { ~~BSR AND.L #$7F~~ MOVEQ #$7F,D0 } tronque
                                   {                    AND D0,D3     } longueur
      CLR   D2
      MOVEQ #1,D1    <- SUBQ #1,A6
      ~~BSR MF22~~   -> BSR MF28
                                décode chaine et l'écrit dans intin
      MOVE.L A1,D0
      SUB.L (SP)+,D0
      ASR   #1,D0
      SUBQ  #1,D0               nouveau control[5]
```

Notes:

lire au plus d2*2 ptsin
d4 = nb de ptsin lus
d6 = nb de intin lus
A1 ≡ control[0] sur pile

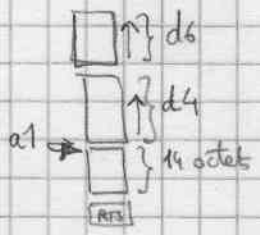
ptsin : d6 (31) = { relatif [1] / absolu [0] }




```
MD900: BSR  PDECTMNP
      BEQ   MD91A
      BSR   WCINDEXAV
      TST.L D6
      BPL   GAJ32
      ADD   ORIGINX,D3
GAJ32: MOVE D3,-(SP)
      BSR   PDECTMNP
      BEQ   MD91A
      BSR   WCINDEXAV           (d6 ≠ 1)
      TST.L D6
      BPL   GAJ33
      ADD   ORIGINY,D3
GAJ33: MOVE D3,-(SP)
MD902: DBRA D2,MD900
      ~~MOVEQ #0,D6~~
      BRA   MD906
```

(5) MD

```
        MOVEM.L (SP)+, D4/D6/A1
        MOVE    D0, 6(A1)                    contrl [3]
MD910 : BSR     DECTMNP
        BNE     ERRAE
MD91A : LEA     VDIPB+8, A2                  met vraiement les tableaux

        MOVE.L  (A2), A0                     ptsin
        MOVE.L  A1, -(SP)
        BRA     MD912
MD911 : MOVE    -(A1), (A0)+
MD912 : DBRA    D4, MD911

        MOVE.L  -(A2), A0                    intin
        BRA     MD914
MD913 : MOVE    -(A1), (A0)+
MD914 : DBRA    D6, MD913

        MOVE.L  -(A2), A0                    contrl
        MOVE.L  (SP)+, (A0)+   <- MOVE.L (SP)+, SP
        MOVE.L  (SP)+, (A0)+
        MOVE.L  (SP)+, (A0)+
        MOVE    (SP)+, (A0)+
```



BSR DECTMN
BNE ERRAE

↓

VDI

```
VDI : MOVEM.L   A5/A6,-(SP)
      MOVE.L  #VDIPB, D1
      MOVEQ   #$73, D0
      TRAP    #2
      MOVEM.L (SP)+, A5/A6
      RTS
```

(5)

appel VDI DS direct

~~VDIC1:MOVE #1,INTIN~~

OVDIC:MOVEM.L A0/A5,-(SP) ⊗

LEA MD94,A5

BSR VDIB

MOVEM.L (SP)+,A0/A5

RTS

MD94:D.W 0

5

Appel VDI n° d3

Pour la station v_ho

111c1

```
VDIC: MOVEM.L  A0/A5,-(SP)
      LEA      MD94,A5
      MOVE     UAESO,D0
      BSR      VDIBA
      MOVEM.L  (SP)+,A0/A5
      RTS
```

(5) VDT

1 ,0, 11		71	
2 ,0, 0		77	
3 ,0, 0		83	
4 ,0, 0		84	
5 ,0, 0, α			
6 ,[illegible], 0	n ≥ 2	90	
7 ,n, 0	n ≥ 1	92	
8 ,1, ~~2n~~ 0	n ≥ 1	94	□
9 ,n, 0	n ≥ 3	96	
10 ,2, n		98	
11 ,2, 0, 1		106	
4, 2, 2		108	
4, 2, 3		111	
3, 0, 4		114	
2, 0, 5		121	
2, 2, 6		116	
2, 2, 7		118	
2, 0, 8		123	
2, 0, 9		125	
2, ~~n~~ 2, 10		125	□

12 ,1, 0	150
13 ,0, 1	154
14 ,0, 4	132
15 ,0, 1	136
16 ,1, 0	140
17 ,0, 1	134
18 ,0, 1	144
19 ,1, 0	146
20 ,0, 1	148
21 ,0, 1	156
22 ,0, 1	158
23 ,0, 1	165
24 ,0, 1	167
25 ,0, 1	169
26 ,0, 2	228
□ 28 ,1, 0	189 et 192
29 ,0, 1	195 et 197
30 ,0, ~~1~~ 0	199 et 200
31 ,1, 2	202 et 204
32 ,0, 1	128
□ 33 ,0, 2	187
35 ,0, 0	230
36 , ~~1, 3~~ 0, 0	232 ⊗
37 ,0, 0	233
38 ,0, 0	235
39 ,0, 2	162

100 ,0, 11	78 et 296	
101 ,0, 0	82	
102 ,0, 1	223	
103 ,1, 1	101	
104 ,0, 1	171	
105 ,1, 0	185	
106 ,0, 1	160	
107 ,0, 1	152	
108 ,0, 2	142	
109 ,4, 1 ...	177	
110 ,0, 0	183	
111 ,0, 37	207	
112 ,0, 16n	173	
113 ,0, 1	138	
114 ,2, 0	103	
115 ,0, 1	242	
116 ,0, ~~2n~~ 0	237	⊗
117 ,0, 1	240	
118 ,0, 0	209	
119 ,0, ~~0~~ 1	85	⊗
120 ,0, ~~0~~ 1	87	⊗
121 ,4, 3	180	
122 ,0, 1	211	
123 ,0, 0	213	
124 ,0, 0	214	
125 ,0, 0	216	
126 ,0, 0	217	
127 ,0, 0	219	
128 ,0, 0	221	
129 ,2, 1	88	
130 ,0, 1	×	
131 ,0, 0	×	

(5) **adi** [k_0 [, k_1]

si k_0 absent appel fonct

si $k_0 \in [-10,-1]$ met ctrl[0-5] pour 11 sauf fonction-k

si $k_0 \in \{6,7,9\}$ met ctrl[0-3] = $k_0, k_1, 0, 0$ (k_1 défaut = 1) +2

si ~~$k_0 = 8$~~ met = 8, 1, 0, k_1 +4

$k_0 = 10$ 10, 2, 0, k_1 -5

$k_0 \in \{30, 112, \sout{116}\}$ $k_0, 0, 0, k_1$ -3

si autre $k_0 \in [1, 131]$ met la valeur de ctrl[0-3]

si $k_0 = 111$ 111, 0, 37 -6

8
116) chaîne → fin init

I/

	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1
TVDI : D.B	~~$20~~ $22	$20	$20	$22	$22	$20	$30	$42	$42	$20
	0	1	2	3	4	5	6	7	8	9
D.B	-1 erreur	$B	0	0	0	0	-2	-2	-4 $10	-2
	10	11	12	13	14	15	16	17	18	19
D.B	-5	-1	$10	1	4	1	$10	1	1	$10
	20	21	22	23	24	25	26	27	28	29
D.B	1	1	1	1	1	1	2	-1	$10	1
	30	31	32	33	34	35	36	37	38	39
D.B	-3	$12	1	2	-1	0	$13	0	0	2
							0			
	100	101	2	3	4	5	6	7	8	9
D.B	$B	0	1	$11	1	$10	1	1	2	$41
	110	1	2	3	4	5	6	7	8	9
D.B	0	-6	-3	1	$20	1	~~$13~~	1	0	~~0~~ 1
							0			
	120									
D.B	~~0~~ 1	$43	-1	0	0	0	0	0	0	$21	1	0