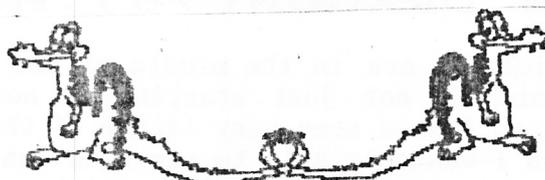


The Newsletter of the National Dragon User's Group

DRAGON



UPDATE

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 ISSUE 120 THE MEECE ARE TAKING OVER! AUGUST 1998  
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**THE GAFFER'S BIT . . . . .**

A somewhat odd Update this time, owing to the necessity of over-running normal space limits with the Meece material in order to avoid confusing everyone by splitting it further, plus a major disaster with the Editorial Dragon which managed to fry its transformer at the worst possible moment, trashing the master disc in the process, which meant almost a complete re-type, which did traumatic things to the Editor's typing finger and even worse things to his temper. So, anyone wishing to complain to the Editor about the results should exercise extreme caution when doing so .... like move to a different planet first!

So what's new? ... not a lot, unless you count the latest Microsoft Bug Collection, now released under the title "Windows 98". So far I've conversed with seven people who have installed it, six reporting major crashes and almost total non-recognition of various sound cards, video cards, and scanners, the seventh actually complained to Microsoft and was assured that the necessary patches and drivers could be easily downloaded from their Web site ... difficult, as he doesn't even have a modem!. That seems to have been about all that happened on the computer scene .... other than that I was told that there has been some kind of football competition going on, but that some foreigners won it anyway, and that a load of peculiar people have been playing bat and ball in Wimbledon for some reason, and some even stranger ones have been trying to knock their balls into holes using odd shaped sticks .... but I don't think any of this is anything to worry about, they can probably get treatment for it on the NHS, or at least counselling. Wonder what causes this obsession with small spherical objects? ... people seem to want to kick, hit, and throw the things, dogs want to chase them, politicians always talk them ... I'm sure old Sigmund would have had a good explanation for it all. Well, I suppose I'd better stop waffling on and get these pages printed out, or you're going to get the August issue about mid September .... apologies for the delays, but nothing I could do about it. Paul G.

**The Editor's bit . . .**

Fortunately for us all, some of you responded to our bout of blackmail last time, and have sent in some articles for publication. This means, of course, that we can all now enjoy Stewart Orchard's genius mouse system for our beloved beast. However, the blackmail doesn't end here. Now that you have got your hands on the code, Update expects to received loads of articles on how to convert our favourite programs to mouse-compatibility. If these are not forthcoming, then you will all be visited in the middle of the night and forced to type in the hex code one line at a time. Twice. Like I've had to (don't ask, just don't ask...) Many thanks to everybody who has sent in material over the last few weeks. It shall appear (even if some has to wait for Christmas and the New Year, as an antidote to turkey and unwanted presents!). This month, for obvious reasons, we are concentrating on the mouse business, but please send us in some material to use - there really IS life in the Dragon yet. SW.

**PEEKING THE DRAGON(76) . MIKE STOTT**

As I am writing this article we are in the middle of the World Cup and I should have had the article finished, not just starting it now. England have played their three league games and I have seen very little of them. The first match was on while I was at work and I was only able to see bits on the TV in the drivers' mess room. The other two games were played at 8pm which meant I was just going on the green to play bowls matches even though there were television sets in the clubs where we were playing on those nights. Still the roars kept me informed of the progress of the matches and I was able to watch the last half hour of both of these games. I have watched many of the other games and have neglected my Dragon and, in particular, my article. Last weekend I watched an edition of Tomorrow's World that I had taped and part of it was about using computers to produce cartoon animation. Previously they have been made using a constructed model moved a bit at a time or computer generated pictures moving the image slightly for the next frame. This tended to produce jerky, and often not very realistic, movement. Now they have come up with the idea of a real person wearing a dark body suit with a number of sensors on it and a number of cameras in the studio. The sensors are placed on the joints and the cameras pass on the movements to a computer. The operator is then able to build up the shape once of the cartoon character on to these images and it appears that the person is actually a furry character or whatever you wish. My next bit is computer related and actually happened to me. I opened a Tessa account with a building society in 1993. When the building society became a bank I moved my other savings to another building society to get a higher rate of interest but left the Tessa as I did not want to lose the tax-free interest perk of the Tessa. On June 7th this year it matured and I informed the company that I wanted a cheque sent to me for the balance of the money as I could get 1% higher interest rate with a building society in a Tessa2 account and sent the letter to their office in the envelope provided by them. Several days after the date of maturity I had heard nothing so I rang up the Tessa Helpline number provided by this ex-building society. They told me that on their computer it was just showing as paid out with no details about how it had been paid. Later that day my local branch rang up to say that my money had been paid to a Mr Scott who had queried this sudden influx of money into his account. Without this they would not have been able to trace my money so quickly. They have told me that their computer records show my money going from my Tessa to Mr Scott's account but cannot trace whether the transfer was done at my local branch or at head office. This, to me, is very worrying that somebody in a bank can transfer money from one person's account to somebody else's and there is no trace whatsoever. So far I have received thirty pounds loss of interest for the time that my money went missing but nobody seems very keen to give me an explanation as to how this could have happened, with head office blaming the branch and vice versa. I will now tell you about more software from the ND library. Keith Nash tells me these items were not in the library when Stuart Woodward it. MELTDOWN is a utility to enable one screen to be "melted" into another. When I tell you that it was written by David Linsley I am sure that you will realise that this is a piece of software of the highest quality. So what exactly is meant by "melting"? Well, instead of loading one picture on to the screen and then loading another by clearing the first picture out first, this program allows you to load one picture on to your screen and when you select your second picture this appears to come out from within the first picture. The effect is very pleasing and gives a much nicer impression than just loading one picture after another using the usual method. Several pictures were included with the disk I received and these are included within a demo program on the disk. There are instructions within the program so you can slow or speed up the melt. I have used EPSON PRINTER DUMPS myself for many years and is also available from the NDUG Graphics Library. There is a README file on the disk which gives comprehensive instructions for using this piece of software. From within the program there is an extensive choice of different printouts that you can choose to print out all your favourite pictures to an Epson (or Epson compatible) printer.

## Pleased to meece you...

And voila, you may now feast your eyes on all of the information you need to get your Dragon fully miced-up. Dig out the last issue of Update for the background details; this month's parts go like this: the first program is the hex loader for the code over the next few pages. Below that is the program to detect the mouse; and after that there is a short demo drawing program to try it all out, followed by the data list!. On top of that, there's plenty of information on how to get the most out of the routines, in the rest of the text. Away you go! (not literally, you understand...)

```

5 'HEX LOADER
10 CLEAR200,29999
20 CLS
30 INPUT"START ADDRESS (HEX)";A$
40 AD=VAL("&H"+A$)
50 IF AD<30000 THEN 30
60 PRINT HEX$(AD);" ";
70 P=0:A$=""
80 PRINTCHR$(128);:K$=INKEY$:PRINTCHR$(8);:IF K$="" THEN 80
90 IF K$=CHR$(8) AND P THEN PRINT K$;:P=0-1:A$=LEFT$(A$,P):GOTO 80
100 IF K$<>CHR$(12) THEN 140
110 PRINT
120 IF AD>30000 THEN AD=AD-8
130 GOTO 60
140 IF INSTR("0123456789ABCDEF",K$)=0 THEN 80
150 PRINT K$;:A$=A$+K$
160 P=P+1:IF P<16 THEN 80
170 PRINT" : ";
180 CK=0
190 FOR A=0 TO 7
200 B$="&H"+MID$(A$,A*2+1,2)
210 B=VAL(B$)
220 POKE AD+A,B
230 CK=CK+B:NEXT
240 PRINTRIGHT$("00"+HEX$(CK),3)
250 AD=AD+1:IF AD<=31169 THEN 60

```

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```

1 'DETECT
5 'SET DTR LOW & NO PARITY
10 POKE&HFF06,10
15 '1200 BAUD, 7 BITS, 1 STOP
20 POKE&HFF07,&H38
25 'CLEAR RX REGISTER
30 FORA=1TO10:Z=PEEK(&HFF04):NEXT
35 'SET DTR HIGH
40 POKE&HFF06,11
50 A=30
55 'WAIT FOR BYTE UNTIL TIMEOUT
60 IF A AND ((PEEK(&HFF05)AND8)=0) THEN A=A-1:GOTO60
70 IF A=0 THEN 90
75 'CHECK FOR "M" SIGNATURE
80 IF PEEK(&HFF04)=&H4D THEN PRINT"MOUSE DETECTED":GOTO10
90 PRINT"FAILED":GOTO10

```

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```

10 REM DRAW DEMO
20 CLEAR 200,31499
30 MS=31500:DT=MS+2
40 IF PEEK(MS)<>32 OR PEEK(MS+1)<>12 THEN LOAD"MSDRV10.BIN",MS
50 CLOSE

```

```

60 PMODE4,1:SCREEN1,1:PCLS
70 POKE DT,0;POKEDT+1,2:EXEC MS
80 GOSUB 210
90 POKE DT,2:POKE DT+1,1:EXEC MS
100 POKE DT,3:EXEC MS
110 B=PEEK(DT+1):X=PEEK(DT+2):Y=PEEK(DT+3)
120 IF (B AND 2) THEN POKE DT,2:POKE DT+1,0:EXEC MS:LINE-(X,Y),PSET:POKE
    DT,2:POKE DT+1,1:EXEC MS: GOTO 100
130 DRAW"BM=X; ,=Y"
140 IF (B AND 16)=0 THEN 100
150 POKE DT,1:EXEC MS
160 GOSUB 210
170 PRINT "CLEAN EXIT"
180 END
200 'CHECK DRIVER STAT S
210 A=PEEK(DT):IF A=0 THEN RETURN
220 IF A=1 THEN POKE DT,1:EXEC MS:R N
230 IF A=2 THEN PRINT "MOUSE NOT DETECTED":END
240 PRINT "MOUSE ERROR";A
*****

```

7530	200C002009091809	: 07F	76B8	02012013170285AF	: 183	7840	E1A8192507E1A81A	: 371
7538	000000000000318D	: 0BE	76C0	26A7283456170200	: 198	7848	22025849E32B10A3	: 286
7540	045A338CEDA6C427	: 39B	76C8	351617024B35406C	: 190	7850	A81C2C03ECA81C10	: 2B3
7548	0FC6FF81082216E6	: 37B	76D0	A824358134011A10	: 1E1	7858	A3A8202F03ECA820	: 351
7550	8C162604C603200D	: 1C2	76D8	A6A824271AA6A81B	: 31C	7860	ED2BE62A1DE1A819	: 3E7
7558	48308C0DEC86308C	: 33F	76E0	81022707A628A7B8	: 2DE	7868	2507E1A81A220258	: 24B
7560	CF6FC46E8BE7C439	: 4DF	76E8	062008AE26344017	: 18E	7870	49E32D10A3A81E2C	: 2FE
7568	00005D0133017001	: 103	76F0	01EC35406FA82435	: 2D2	7878	03ECA81E10A3A822	: 332
7570	4601C9024F026702	: 1CC	76F8	81A6A81BC6053D5C	: 34E	7880	2F03ECA822ED2DA6	: 3A8
7578	7202881000001F0F	: 13A	7700	308DFE773AA64127	: 37A	7888	A824270CA6A81B81	: 2E9
7580	0800003F1F020000	: 068	7708	1DEC02A1422512E1	: 306	7890	0226038D673B8D18	: 2E9
7588	FFBFE7C439C601A6	: 50F	7710	43250EA144250AE1	: 26B	7898	3BAEA811E62E4FC4	: 3C9
7590	8CD626F68D5026F2	: 473	7718	45250630428D0720	: 196	78A0	F05849308BEC2BC4	: 427
7598	C604A641810222EA	: 340	7720	2AC605E7C439A680	: 3FF	78A8	F044565454543A39	: 2F9
75A0	A7A81BC6053D308C	: 32E	7728	E6A8253DED81CA6	: 447	78B0	8DE7AC262711A628	: 34C
75A8	D23AA680A7A82517	: 3BD	7730	80E6A8253DED81E	: 423	78B8	A7B806A684A728A4	: 402
75B0	0174CC0100ED2BEC	: 346	7738	A680E6A8253DED8	: 4AB	78C0	A4A821A784AF2639	: 3A6
75B8	A8224456ED2D6F22	: 30F	7740	20A684E6A8253DED	: 427	78C8	338D00BF3404E7C0	: 35E
75C0	6FA8246F2F6FA810	: 300	7748	A82239AE2BAC81C	: 34C	78D0	EC84EDC1E6A8153A	: 4FB
75C8	8D63FC010DED8D02	: 378	7750	2C03AEA81CAC820	: 315	78D8	6AE426F43584338D	: 3E1
75D0	10308D0204BF010D	: 1A0	7758	2F03AEA820AF2BAE	: 330	78E0	00A9A6C03402ECC1	: 3F2
75D8	8609B7FF06A78C88	: 406	7760	2DAC81E2C03AEA8	: 324	78E8	ED84E6A8153A6AE4	: 49C
75E0	CC0100ED41398638	: 2F2	7768	1EACA8222F03AEA8	: 31C	78F0	26F4358200804020	: 2B1
75E8	B7FF07C603860AB7	: 3CD	7770	22AF2DA6A8242706	: 29D	78F8	100804028D46AC26	: 1C3
75F0	FF068E0100B6FF04	: 34D	7778	17FF5916FF263934	: 317	7900	2604A128273D3416	: 1A1
75F8	301F26F9860BB7FF	: 3B5	7780	011A10A641E6A825	: 2C5	7908	AE268DD2AE62E661	: 48A
7600	068E2000B6FF0585	: 2F3	7788	2DED2BA642E8A825	: 3F0	7910	8DB63516A728AF26	: 332
7608	08260A301F26F55A	: 1FC	7790	3DED2D6DB63581A6	: 3F6	7918	338CD93404C63DA6	: 379
7610	26DBC60239B6FF04	: 3BB	7798	A819A741ECA811ED	: 43B	7920	C62602C612A78C07	: 300
7618	814D26F38601B7FF	: 424	77A0	4239EC42EDA811C6	: 415	7928	E78C07EEA817C610	: 3FD
7620	045F391060206010	: 19C	77A8	06A6412A03E7C439	: 2FE	7930	A6C03DA884E801ED	: 4A5
7628	C020C020C0FC00BA	: 436	77B0	A7A81940A7A81A39	: 34A	7938	84E6A8153A6AE426	: 3D5
7630	EDA813308CEDB600	: 407	77B8	A641AE42C6048102	: 324	7940	ED350239EC2D4456	: 310
7638	B648AE86AFAB15C6	: 464	77C0	22142704AFA42003	: 1D7	7948	A6A81681C0270154	: 321
7640	07308C0F85022703	: 183	77C8	AFA817A6A8242708	: 30F	7950	3404A0E481082502	: 26C
7648	30085AE78D0337AF	: 2EF	77D0	17FF0116FEECE7C4	: 4A4	7958	8608A7E4A6A8153D	: 389
7650	A8173980C0E0F0F8	: 500	77D8	39B6FF0585802603	: 321	7960	AEA813308BEC2B44	: 37F
7658	E0B010C0F0FCFOF0	: 62C	77E0	7EC700318D01B5B6	: 36F	7968	56A6A81581102601	: 271

7660 C00C03860AB7FF06 : 327	77E8 FF045F85402602E6 : 335	7970 54340454545486ED : 2FB
7668 EC8D0175FD010D8D : 387	77F0 223023A7855CC103 : 2C1	7978 5CE1A815250286A7 : 34E
7670 636F8DFEF3393401 : 3BE	77F8 2703E7223B6F22A6 : 2A5	7980 A78CB45A3A8607A4 : 3AC
7678 1A10A62FA7418403 : 26E	7800 845F44564456EA01 : 302	7988 E035840900000000 : 1A1
7680 A72FEC2B8D0AE742 : 3AD	7808 E7295F44564456EA : 38D	7990 0000000000000000 : 000
7688 EC2D8D04E7433581 : 38A	7810 02E72A8403A1A810 : 2F3	7998 00000000FF400040 : 17F
7690 3402A6A825442706 : 21A	7818 2723340243A4A810 : 21F	79A0 0000052909000000 : 037
7698 64E4564426FA3582 : 3B9	7820 48484848AA2FA72F : 2CF	79A8 930090000004000C : 133
76A0 A641273034011A10 : 19D	7828 A6A81043A4E44848 : 3B9	79B0 001060765310F000 : 239
76A8 A6A8242625A6A81B : 326	7830 AA2F84FCAAE0A72F : 4B9	79B8 0060005001800090 : 1C1
76B0 810227081701E217 : 1C3	7838 8403A7A810E6291D : 312	79C0 00105C27F94F395D : 271

### Microsoft-compatible mouse driver version 1.0 - Function description

EXEC address = LOAD address

User data area = LOAD address+2

Functions are called by POKEing values into the user data area and then EXECing. The first byte is always the function number, followed by data appropriate to the particular function. The driver must be installed with function 0 before any other function will operate. Upon return from a call, the first byte in the user area is always a status byte, indicating success or failure, followed by any returned information.

In the function descriptions below, the entry and exit values correspond to consecutive bytes POKEd or PEEKed in the user data area.

The reason for implementing the function calls in this way is that it allows me to add extra functions to the driver whilst maintaining compatibility with software written for earlier versions. eg.

```

10 MS=31000 : DT=MS+2 : 'ASSUME LOAD ADDRESS WAS 31000
20 POKE DT,0 : POKE DT+1,0 : EXEC MS : 'INSTALL IN TEXT MODE
30 A=PEEK(DT)
40 IF A THEN 1000
50 PRINT "DRIVER VERSION";PEEK(DT+1 );",";PEEK(DT+2)
60 POKE DT,2 : POKE DT+1,1: EXEC MS : 'SHOW POINTER
etc.
1000 IF A=1 THEN PRINT 'WARNING... ALREADY INSTALLED" : GOTO 1050
1010 IF A=2 THEN PRINT 'NO MOUSE!":END
1020 PRINT 'MOUSE ERROR";A : END
1050 PRINT 'PRESS ANY KEY TO RESTART'
1060 IF INKEY$="" THEN 1060
1070 POKE DT,1: EXEC MS : RUN : 'UNINSTALL & TRY AGAIN

```

Meaning of return status codes:

0	Successful call
1	Attempt to call function 0 with driver a(ready installed)
2	Mouse not detected
3	Attempt to call function other than 0 & driver not installed
4	Invalid value for 'mode'
5	Attempt to set bounds off screen
6	Attempt to set acceleration threshold greater than 127
255	Invalid function code

Function 0 - Install driver

Entry: 0, mode

Exit: status, major version number, minor version number

mode: 0 - Text (32 x 16) & use text pointer  
1- Lo-res (64 x 32) & use text pointer

2 - Hi-res (256 x 192) & use graphics pointer

Detects presence of suitable mouse and if successful, sets up IRQ routine. 'mode' tells the driver which coord system to use when specifying positions and boundaries. The install routine reads information from locations 182 (PMODE) and 186/187 (graphics base address) in order to display the pointer correctly. For this reason it is necessary to uninstall and reinstall the driver around PMODE changes. The pointer is initially hidden after calling this function.

Function 1- Uninstall driver

Entry: 1

Exit: status

Hides the pointer if visible and then disables the IRQ routine.

Function 2 - Show / hide pointer

Entry: 2, mode

Exit: status

mode: 0 - Hide pointer

non zero - Show pointer

Turns the pointer display on and off. This function is required to initially display the pointer and subsequently when you need to change the screen contents. eg. hide pointer, draw something, show pointer.

Function 3 - Get mouse info

Entry: 3

Exit: status, button state, x position, y position

button state: bit 0 - right button pressed

bit 1- left button pressed

bit 2 - right button pressed since last call

bit 3 - left button pressed since last call

bit 4 - right button released since last call

bit 5 - left button released since last call

bits 6 & 7 - zero (reserved)

Reads current button and position information. The button state bits are set when the relevant conditions are true.

Bits 0 & 1 reflect the current state of the buttons. Bits 2 & 3 are set if buttons have been pressed since the last call to this function. Bits 4 & 5 are set if buttons have been released since the last call. Bits 2 to 5 have many uses to the programmer. eg. If the routine reading the buttons is slow, then it is possible to miss the information in bits 0 & 1.

The other bits remain set until you are ready to read them.

Function 4 - Set / release bounds

Entry: 4, mode, [left x, top y, right x, bottom y]

Exit: status

mode: 0 - Release bounds

non zero - Set bounds

This function allows you to confine the range of coords (and therefore the pointer) to a specific region of the screen.

Useful if a portion of the screen is continually being updated and you want to keep the pointer away from it. Also handy if you want the user to do something specific. eg. click 'OK' in a message box. Releasing the bounds returns things to normal. (The information in square brackets is ignored in this case)

Function 5 - Set coords

Entry: 5, x position, y position

Exit: status

Directly sets the coords of the pointer. Useful if you want the pointer to appear in a specific place to draw the user's attention.

Function 6 - Get miscellaneous mouse info

Entry: 6

Exit: status, acceleration threshold, text base hi-byte, text base lo-byte

Returns information not covered by other functions. Note that the data format is similar to function 7, allowing you to read the information, modify it and write it back. (See below) The acceleration threshold is best explained thus: if you

move the mouse faster than the threshold speed, then the speed is doubled, allowing you to cover the whole screen with small mouse movements, whilst still allowing fine control at slower speeds. Valid values are in the range 0 to 127. The text base specifies the start address of the text screen, which is initially set at the usual 1024.

Function 7 - Set miscellaneous mouse info

Entry: 7, acceleration threshold, text base hi-byte, text base lo-byte

Exit: status

Sets miscellaneous information. See above for a discussion of the meaning of the entry data.

Function 8 - Define pointer

Entry: 8, mode, data1, data2

Exit: status

mode: 0 - Define text pointer (data1= AND mask, data2 = XOR image)

1- Reserved

2 - Define graphics pointer (data1= image address hi-byte  
data2 = image address lo-byte)

Allows you to change the appearance of the pointer. The text pointer occupies one byte of the screen display and is created by first ANDing the screen byte with the mask and then XORing it with the image. The mask and image are initially set as 255 and 64. This has the effect of inverting any text that the pointer is over. You could turn the pointer into a white blob by specifying 0 for the mask and 207 for the image. The graphics pointer is defined as 8 bytes which are XORed onto the screen one below the other. If you wish to define your own pointer, you need to set up your own 8 bytes somewhere in memory and specify the address with this function. Useful if you want the pointer to be 'context sensitive' and change shape depending on where it is on screen. (Or you simply don't like the predefined pointer.)

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## Please Note

This issue is an exception to the usual rule ... normally we wouldn't even consider devoting four pages in one issue to one topic, and it certainly is NOT going to happen again. The only reason it happened this time was that the subject matter seemed to justify it. So please remember that as of now Update will be returning to it's usual "one page fine, two pages too long!" rule, otherwise we get complaints about lack of variety. OK?. Paul

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## Dragon Offline Web (3) Keith Nash

By popular request, NDUG can now offer the complete Dragon Internet software archive, which is maintained online by Ross Hamilton. The offline version includes all the files available on Ross's web page, unzipped and ready for use on a Dragon Emulator. There are 262 CAS files (images of cassette software, mostly games, a few duplicates) and 40 PAK files (program snapshots). The archive includes Ross's complete web page, and a text-file-based index. The archive is available on 5 high-density 3.5" PC disks (or 6 high-density 5.25" disks, or 10 double-density 3.5" disks).

Please send blank formatted PC disks, £4, and a stamped addressed envelope, to Keith Nash, 16 Lansdowne Street, Worcester WR1 1QD. Cheques and postal orders payable to NDUG.

## Fitting New Drives... G. Tutti et t

First, a history lesson; the original floppy disk interface used edge connectors pretty much the same as modern 5.25" drives. This interface was designed by Shugart Associates circa 1970 and was designated as SA450 and could operate two drives (remember, we're talking 14" and 8" drives at this time) and were for the most part single sided. Since then, the interface has evolved and significant changes have been made. At the time the Dragon disk interface was designed, the 'modern' Shugart interface was well established and was used in the early IBM PC and the BBC, so it seemed the natural choice and had distinct advantages as it could use standard Shugart drives and the interface was relatively simple. Although Dragon Data chose to use single sided drives, it can handle double sided too. As technology advanced, the ability to put more data on a smaller disk increased, culminating in the somewhat ill-fated 2.88Mb drives from Sony. 3.5" drives, with their smaller size, higher capacity, and robust disk casing became more popular and then with economies of scale became cheaper. Remember the early portable (?) PCs, the Osborne for example, with their huge but low capacity 5.25" drives? These were not lightweights. It is not surprising then that the 3.5" saw a lot of its earlier life in portables and later laptops. 5.25" drives are getting harder to find, cost more, and are rarely specified on current PCs. The 3.5" has become the standard. For us Dragon users, this is a good reason to adopt 3.5". When connecting any drives, it is important to be aware of the possible different connectors and pin-outs. There are two types of connector for these drives: 34 way edge, and 34 way DIL. Edge connectors are usually polarised, but 34 DILs are often not. The only clue is the red line on the ribbon cable or an arrow on the connector itself, which indicates (or should) pin 1. Unfortunately, pin 1 is not always indicated on the drive. Below, I have compared the pin outs from various drives with the Dragon ones. Note that the standard drives are practically the same as the Dragon specification, but the high density pin outs are different. As long as the drive in question has standard power and data connectors and can be configured to be drive 1 to 4, then there should be no problem (3.5" high density excepted). Finally, a word about software. As you know, DragonDOS does not support wild cards, so when you copy files from one disk format to another, this poses a problem. Manually copying files one by one is tedious, but there isn't much choice. Once a particular program is on the new disk format, then there should be no problem. By the way, still no luck with OS9's FORMAT command - so OS9 still formats the disk as if it were a single sided 5.25" disk! If anyone has any questions or problems fitting newer drives, then I am more than willing to assist on 01458-445684.

DragonDos Cart.	Dragon Drives	Std drives 5.25"&3.5" HD & DD	HD Drive 3.5"	Shugart SA-450 standard
2	not used	not used	Auto Eject	Redcd.Wr/Current
4	not used	not used	In Use	not used
6	DS3	Drive Select 3	Reserved	not used
8	IP	Index Pointer	Index	INDEX
10	DS0	Drive Select 0	DS0	MOTOR ENABLE 1
12	DS1	Drive Select 1	DS1	FLOPPY SELECT 2
14	DS2	Drive Select 2	Reserved	FLOPPY SELECT 1
16	MOTOR	Motor Select	Motor On	MOTOR ENABLE 2
18	DIRC	Head Direction	DIR	DIR
20	STEP	Step	STEP	STEP PULSE
22	WD	Write Data	WD	WRITE DATA
24	WG	Write Gate/Enable	WE	WRITE ENABLE
26	TR00	Track 00	TRKO	TRACK 0
28	WPRT	Write Protect	WPRT	WRITE PROTECT
30	RANRD	Read Data (Rand/Read)	RD	READ DATA
32	SS0	Side 1 Select	SS1	HEAD SELECT
34	not used	Disk Change Line	DCHG	DISKETTE CHANGE

**EASY AS SPREADSHEETS?. Ken Grade.**

I never thought I'd use a spreadsheet, until some awkward prat wanted to track down an anomaly in a bank account which dated back a long time. The idea that there were several columns which could be set up to do a range of calculations on rows and rows of figures was fascinating - but enough to put me off, up till now.

Being simple-minded, I tried the simple Dragon-based one, which is on the (Group) Utilities disc, first. This was enough to get the idea that the rows and columns are divided into boxes (called cells in spreadsheet language) and can contain headings(text) or a formula to add,subtract, multiply, or do any other calculation on the figures typed into those cells and subsequent cells. I then moved onto "ASEASYAS", which is a well-known shareware Lotus clone.

Take the case of a bank account or cheque book entries. Starting at Row 1, Column 1, this is referred as "A1". (Columns have letters, Rows have numbers.) It could have "Transaction No." or "Date" as a heading; Column 2: Debit; Column 3: Credit; Column 4: Balance. Next Row down (Row 2), in the Balance column, put a formula to give a balance of Credit minus the Debit/Cheque plus the PREVIOUS BALANCE. This is so you don't have a minus figure before you even start (so you ARE starting with a minus figure? No problem with the spreadsheet -but you need to set it up to show a minus sign - more about that later.) The formula you could use is :-  $+D1+C2-B2$ . To get a starting balance, enter the last final balance from a bank statement in the CREDIT column on Row 2 (C2). This should now be displayed in the Balance column. The formula in D2 needs to be copied to all the subsequent cells in the "D" column, but also needs to be incremented to do the calculation on the subsequent entries. No worry - the spreadsheet COPY command can be persuaded to do this. The routine is to place the cursor on the cell to be copied. Press "/", then "C", and when prompted for "From which cell", press <Enter>. The cell number is then displayed again, with the prompt "To which cell?". Move the cursor down 1 cell, press the full stop, which anchors the cursor at that cell, then move the cursor down (with arrow key) as far as is needed, then press enter. The formula will be updated with the cell numbers "+D2+C3-B3" as the cursor moves downwards.

Column (or row) totals can be calculated by the @SUM function. Place the cursor at the bottom of the column (or the end of the row) you want adding, move it up one cell when you should see the cell number appear after the @SUM("."). Press "." Continue moving it upwards to cover all the cells you want adding, plus the one above, then type in a closing bracket ")". (Without the quote marks!) The reason for including one cell above and below the range to be added is so that if a row is deleted or an extra one(s) inserted, the formula will be updated automatically. Money can be shown as currency, even with a pound sign - but ASEASYAS must be started with the command ASEASY <space>/MY=£ <ENTER>. Once loaded, choose the Range (/ then "R"), Format command ("F"), then "currency". The comma "," choice from the same sub-menu puts in a comma after thousands, millions etc (you all got millions in your accounts, haven't you?), and displays credits in brackets (why? don't ask me, ask an accountant).

If the range of cells being used to enter and display values is rows A to E, and columns 1 to 100, then row F could be used to show the result of a column addition, i.e. in F100 type in +C100, when C100 contains the @SUM formula for the column. The result can be hidden from the C column (from the Range and Format menu) so it is shown only in F100. The crafty ones will have cottoned on that this cell can be altered at a future date to +C250, or to whatever cell number in which the next period's totals are calculated.

The Dragon spreadsheet mentioned earlier will do most of these things, but won't show a pound sign for money! It differs when copying formulae downwards - there are 2 forms of the command. One updates the formulae, the other doesn't. It's not great on macros, but they are a luxury you can do without, to begin with.

I've had a lot of help from Eddie Freeman on this spreadsheet topic, (Thanks again Eddie) and he and I may well be writing more on the subject. I'll stick to the easy bits, and perhaps Eddie can fill in on the more professional techniques.

**Dragon Web (4) . . . Keith Nash**

NDUG is now an internet service provider, and as part of this service, your own web pages can now be included in DRAGNET: both in the Dragon Offline Web Pages, which are available to NDUG members on floppy disk, and in the online equivalent. The online DRAGNET site consists of links to the existing Dragon web sites, and complete web pages belonging to NDUG members who do not have direct internet access. The first such pages are now online, and are hosted on behalf of Spencer Davies. They include early issues of Update, converted to HTML so they can be viewed directly using a web browser. If, like me, you did not belong to NDUG from the very beginning, these make fascinating reading. If you have a PC running Windows, then web pages can be constructed using software from magazine coverdisks. If you have DOS only, then it is necessary to write and edit the HTML files using the edit facility in the Arachne browser (or using a text editor of your choice), and then preview the pages using Arachne. Arachne is available from the PD library for £1 + blank disk +SAE. I am looking into whether NDUG can provide software for web page construction, and whether any 'point and click' software exists for DOS, and I hope to report on this in the next issue of Update. When you have constructed your web pages, send them to me on floppy disk and I will upload them to the DRAGNET site. Filename references should be in lower case, with not more than 8.3 characters (as usual for older versions of DOS). Your home page should be in the root directory and should be called "index.htm".

**The Late Late Bit . . . . .**

It was almost The Late Update (in every sense) this month, because the Editorial Dragon decided to blow its transformer and splatter garbage all over the completed master disc, which has resulted in a lot of hurried retyping by Stephen and some serious re-scheduling at this end!. Well, if you are reading this we succeeded. A most peculiar issue all round really, for which I apologise, but we should be back to our normal more diverse selection of fascinating reading by the October issue, so fear not. So what's new, other than some original curses from Messrs Grade and Wood? .... not a lot really, I still haven't been able to locate a firm which will admit to having a Win 3.11 TV/Capture type card in stock, in fact most insist that such a thing never existed, which seems odd to me, because I actually HAVE such a beast in my possession!. Unfortunately it is a "believed good" one that someone removed from a customer's machine when upgrading it, and he omitted to retain the drivers for it, which makes it as much use as a parachute in a submarine, hence the search for a replacement!. If anyone CAN source such a thing, new, used, or whatever, do please let me know because most suppliers are the type that will only just admit that there were computers before Win 95 (they'll probably deny 95 existed soon, now that they are trying to punt 98) ... I've had reports of them refusing to admit that there is such a thing as a VGA mono monitor ("Oh no!, ALL VGA is colour"), and don't ever ask them for a multi I/O card or an additional parallel port card, they'll die of fright at the very idea of such things!. Of course, I'd settle for the software to go with the card I found ... an early ISA slot Hauppauge TV thing with more jumpers and unidentified pin sockets than enough, but that would be asking the highly improbable if not the impossible!. Download it? ... well, easy enough, but one needs Net access, which I don't have!. So any help appreciated. Mention of Net reminds me ... I think Keith Nash may be a little optimistic calling the Group an Internet Service Provider .... Demon, Compuserve, AOL, etc are ISP's, but NDUG? .... that is really stretching the description a bit, surely, Keith?!. Well, there were several (totally unimportant) things I was going to mention, but space doesn't permit, so they'll have to wait. Must refute Ray's suggestion in the current Up-2-Date that I'm "anti-establishment" though ... quite the reverse, the bloody Establishment is anti-ME!. It grabs my money and restricts/legislates against just about everything I like doing!. So who is anti whom?!. Paul G.

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