The Gaffer's Bit...............

Much as I like the Dragon, I have to admit that it's a pretty ancient piece of hardware, and 64k isn't the enormous memory it seemed to be two years ago. This means that the popr old beast needs good marketing.

Did anyone actually get a sensible reply from Eurohard?. OK, so it's a silly question, but I had to ask. I don't know about you, but personally I'm sick of the contemptuous attitude that both Eurohard and Compusense have towards the people who keep them in expense account lunches. Write to Compusense and they send you a price list instead of an answer..(I get more complaints about that than anything else!)......Write to Eurohard and waste a stamp. The attitude seems to be that we aren't worth consideration once they've got our money, and that we'll keep on paying their ridiculously inflated prices without protest. Well, I've got news for them....a lot of our members are buying second machines, and they AREN'T Dragons, simply because they're sick of being ripped off and ignored. It's about time the Dragon was repriced to compete with the other 64k machines on the market....under 100.00, and time it was given GENERAL distribution rather than a mail order monopoly, otherwise there wont BE a Dragon by this time next year. Software shortage?..of course there is!, who would invest money and time in writing for a machine that most of the public believe to be dead?.

If you're as sick of this as I am, then PLEASE make sure that those concerned know about it. Write to them, phone them, get some letters off to the computer magazines.....The Group can carry on as long as there are Dragon Owners that want us, but the Dragon needs SALES, and it isn't going to get them this way.

Well, that's all for this month, so I'll let you get on with the more interesting material.

Paul G.

THE EDITORIAL BIT............

This month I'm going to bore you all with a couple of comments about the show. I'm not going to give a review, that's covered inside, it's just the inconsistency that bugged me. Being there both days for my sins gave me a bit of time to abandon the stand and have a look around, and the thing that I noticed most of all was the different attitudes I met. At some stands the exibitors semed to treat their customers (or potential customers) almost with contempt, the "if you're not going to buy without asking all these damn stupid questions then I can't be bothered to answer" type while at others they almost seemed to treat the show as a place to explain their products, plans and philosophy of life, and regard the actual selling as secondary. All I can say is that the second type had more customers, and certainly created more goodwill. If the show is repeated then I hope that this type will return and that perhaps the obnoxious variety will reform their ways and realise that these are the people who keep them in business and that perhaps they should take a course in basic manners.

T.L.

—.

Well, I made the phone call to the Welsh tourist board, sent off my 35.00 and went off to a smashing little hotel in darkest Cymru to find out whether or not I should chuck the Dragon in the bin and go BBC. As if that wasn't enough, our chairman has persuaded me to provide some extra padding for the postman to lug about.

On arrival, the bar seemed the reasonable place to gravitate and sure enough, there they all were. Hurdle one overcome, I'm not the only boozer! Skilful conversation and mingling by Bob Morgan overcame the reticence and made us drop our 'church hall dance' postures. During friday evening, Ted and Stan Oprychal (and cigar) of Compusense regaled us with the Tales of the Real World of Computer Marketing. Gosh! these chaps really have it tough! We really should pay more for our hardware, and be glad to do so!.(definitely going to drop the Dragon)!

Following morning (no hangover), full complement, Ted and Stan Oprychal and Bob Lloyd from Race electronics. The latter of the grey face and gravelly voice who, having suffered disasters on the way finally arrived in the small hours (when decent folks are abed), and was taken pity on by the lady over the street who heard his bangings and ravings in the middle of the night and came across in bare feet to let him in. At least that's what he told the officer! Now the pitch from Ted (small daughter tugging at one sleeve, us at the other). All positive this time (a change from last time, definitely going to keep the Dragon). Unfortunately, most of it went right over my head but everyone else looked intelligent and SEEMED to understand, so it didn't seem right to say anything. All about Eurohard (whoever they are)| Flex vs. OS9, aparently Flex is flavour of the month| the Dragonplus expansion board and modems (modii ?). Bob Lloyd gave a rundown on the history of the Dragon and the numerous types and issues and demonstrated the Eprom programmer, sideways ROM and expansion box, all very impressive.

Between them, Ted, Stan and Bob gave all the Griff on the contents of the Compusense Broadsheet, and of course the oportunity to play with them all. On Sunday morning Stan did the bit about Chat and One to One, and I suppose all the whizz kids who know all about these things went 'hands on'. I chose to settle for items of more immediate interest to me since I don't understand about bulletin boards and electronic mail.

My monitor display was all fuzzy and shimmered about, Ted hoiked out the PAL chip and it was beautiful, something about clocks being slightly out of phase| simple, but it had frustrated me for some time. Keith who used to work with Dragon Data and knows the machine inside out, was able to check mine over and convince me that it wasn't broken| Greg and Jason, hackers extrordinary and to whom nothing is secret, straightened me out on relocating programs in memory and accessing the cartridge slot| Fred, in much the same boat as me, helped reassure me that I'm not yet mad, or even more than usually dense| Eric was sympathetic and able to help with a word processor which works (I've got 5). It was meeting these people and others which was so helpful. I came away with a writable RAM cartridge, a diagnostic program to help me check for faults in the computer if I have any doubts (which with some of the sofware I've bought is quite often), numerous other software items including the most effective utility I've ever come across, it disassembles and catalogues almost ANYTHING. I now have a much improved knowledge of the machine, a revitalised interest in learning more about how to make it go and a list of phone numbers and friends who are only too pleased to help in any way they can. Altogether time very well spent: We should do this kind of thing more often.

Ideas Wanted...

I know we will never be able to please all of the members all of the time, but we would like to at least try, so if you have any specific subjects that you'd like us to give more space to, please write and let us know.
We could also do with more material from you on YOUR pet Dragon subject.......don't forget that the Group has no "staff of dedicated experts" or similar mythical beings, only Dragon Users...and that includes YOU. Be an Expert in your spare time....write us something!..(you don't even need to use joined up writing!).

DRAGON DIARY ...... NIEL SCRIMGEOUR

Piracy is a very lengthy subject, that's why it's going to stretch over 2 issues. Basically there are 2 types, illegal copying and company piracy (ie. ripping us off which Compusense and especially Microdeal are masters at). Whilst talking about this subject I'm going to hit a few nerves and I'm not going to apologise for it. These views are my own and have nothing to do with the group. This month I'm shall look at personal copying.

Where did it all start from ? Well, for me it all started when I bought Microdeal's Mansion Adventure. The cassette insert advised me to make a copy so that I wouldn't have problems loading the program (or shouldn't). This I did. Now you can't blame the companies for making this statement, after all the more helpful they are the more cassettes they'll sell, that's the philosophy anyway. The problems really started when users began to demand, and rightly so, a better quality of program. On the whole the companies produced what the users wanted. One of the computers that it DIDN'T happen to was the Dragon There wasn't anything wrong with the Dragon, it was just that not a lot of people knew much about 6809 code. The only thing that the software houses could do was to churn out stuff of the same old quality. The problem was that the cost stayed the same. When people realised this (and I include myself), copying began to grow as the view was 'why should I pay 8 quid for this when I can get a copy off someone else for nothing ?'. Since then it has got out of hand. Of course, human nature being what it is there will always be copying no matter how good the program is, and once a problem like this has started, it's nigh on impossible to stop. In my view the software companies have created the problem and are now paying the price. They are saying 'without sales and revenue we can't survive.' My question is where did all the profits go when they WERE getting revenue ? Record companies have survived the problem.

I admit to having copies of some software and I bet that 99% of our members have at least one illegal copy. To be honest 90% of the stuff that I've got isn't worth the price of a blank cassette. I have decided to take an appropriate stance, if I can get a copy of a prog and I think that it is worth X pounds then I'll save up and buy the original as long as it's selling for no more than X pounds. This applies to my Amstrad as well as the Dragon and indeed I'm saving up for Tasword 6128 (25.00). Anything that falls below the price mark doesn't get bought and in fact the only 2 Dragon programs I've bought recently are 2 of the Scott Adams adventures.

The other problem with piracy is the steps that companies take to stop it. They go to extraordinary lengths to counteract it and most of the time they frustrate the purchaser because the damn cassette won't load. Not only that but the prog can't be shoved onto disc. This creates the eternal circle with nobody getting anywhere. What is the answer ? Well there isn't one as the problem has progressed too far to be turned back. Companies and manufacturers might have to look for a new medium for loading and storing data. One solution being mentioned is the use of compact disc. However systems like this cost money and people can't afford another storage device. After all, the majority in the market are aged between 10-25 with the exception of Drgaon owners who range from 15 upwards. Money is tight at the moment (except for our chairman who is approaching his second million!!) the cheapest things to use are cassettes but cassettes are very easy to copy if you have 2 recorders linked together with a bit of wire.

Computers have just come of age. People are starting to use them for the purposes they were originally intended for. The arcade market has been and gone and the only games market in the future will be the adventure/strategy type. These games work best on disc anyway so many of the moaning companies are about to die and it serves them right. If you don't supply demand then you don't stay in business.

The views expressed in this article are those of the author, they are not neccesarily those of the group, it's editor or chairman ..... TL

[It's not MY account that's approaching the second million.....it's all these software firms like Vidipix that are in the money!. Paul.].

4

COMMUNICATIONS (a) ... GARY COXHEAD

By now, many of you, I hope will have tried accessing a bulletin board local to you and had a look around and explored it's features. This article deals with a few systems I have accessed, my opinion of them and and their phone nos.!!! My current list of bulletin boards totals 101 (yes, one hundred and one), of which I have accessed about 5 on a regular basis. I must warn you that an evenings exploring will cost you quite a bit as very few of them are just a local call away, my last phone bill came to 110 pounds so beware !!!

1) Basildon Itec-0268 25122 24hrs 300 baud
Mainly local news and items of interest. Run by the college as a teaching aid so of limited interest to the non enthusiast. Only a small mail area.

2) BBS City-01 3011 4110 24hrs 300 baud
A very good TBBS system. Good messaging and special interest group areas. Has been down recently due to a system fault, worth trying.

3) Co-Co BBS-091 265 1944 2100-0600 300 baud
Run on a Tandy co-co with disc drives by Jim Bell. Sofware is home grown but very good. Especially good for Dragon and Co-Co users, good messaging area, give it a call.

4) Distel-01 679 1888 24 hrs 300 baud
A commercial system run by Display Electronics of London. Mainly for accessing their stock computer and ordering equipment. Stock list regularly updated and there is a bulletin and news section which often contains useful tips and features.

5) Mailbox 83-0384 635336 WD1800-0830 WE24hrs 300 baud
Another good TBBS system. Unable to have a good look around due to not being able to register for some reason. Good mail and special interest section, joke section and hackers section.

6) Maptel-0702 552941 24hrs 300 baud
First system I accessed. A commercial system like Distel but not quite so much detail.

7) Micro Live-01 579 2288 24hrs 300 baud
Run by BBC Micro Live programme, mainly for messages and info, not many other areas, apparently off-line at the present.

8) Prestel-01 680 8245 24hrs 300 baud
300 baud access to the wonderful world of Prestel. must be registered to use the system and some of the data is not compatable with my system. To get a demo of what it can do, use a log on no of 44444444 and ID code of 4444. This allows you into the free demonstration area.

9) React UK-0376 518818 24hrs 300 baud
First Board especially for Dragon users, run by the CB radio group REACT. A bit slow in the early days but after a lot of work from the sysop, George Lloyd now becoming a useful forum for Dragon bits and pieces. Call them up and give the board your support. Good message and notice board section.

10) TBBS Blandford-025854494 24hrs 300 baud
A very good system and probably the cause of my large phone bills!! excellent messaging areas, special interest groups etc. takes a long time before you really get deep inside the system. Something new to find everytime you call.

11) TBBS London-01 348 9400 24hrs 300 baud
Yet another excellent system, and the one I call more than any other. Excellent messaging area, special interest area, childrens area, graffiti, lonely hearts etc. etc. must be registered to access all the system, details on the board.

12) CNOL (Clinical Notes On Line)-0524 60399 24hrs 300 baud
This one is put here to give you some idea of the way BB's may go in the future. Must be registered to access. Huge database of medical information and help, of use mainly to the medical profession.

I hope that I have given you all something to cut you. teeth on. As I said, these are just a few of the many I have (the others are being published bit by bit in our BB list .. TL). You will see from this short list the varied ways BB's are operated, and for anyone out there thinking of starting their own BB,

just think on this. Research has shown that the average sysop spends 50 ... a week on average, maintaining the message areas. Monthly expenses inc ude electricity, telephone rental and supplies totalling about 50.00. Start up costs averaged at 1500.00, if you shopped around you could do it for 1000.00. The point of this is that people give of their time and effort for free. Any misuse of their system, bad language, calling out of hours etc. will only make them pack up their bags and leave, which will mean less systems for us. So please, be considerate and do everything you can to make the sysop's job and life as pleasant as possible.

Don't forget, if you want any help or advice, please write or call.

ASCI CORNER .... PAULINE HAMPSON

This month being the festive season I have had fun with all my old favourite and produced a quiz for your amusement.
1) Name the robot in Return of the Ring?
2) In Ket, how do you deal with the dragon?
3) In Shenanigins, what do you find in the garbage?
4) What is El Diabalero's name?
5) In Voodoo Castle, how do you get the bag?
6) In Franklin's Tomb, how do you open the sarcophagus?
7) Who is the arrow maker?
8) In Syzygy, how do you pass the airless corridor?
9) In Seaquest, how do you enter the beach house?
10) Where is the white figurine in Ten Little Indians?
11) In Madness and the Minataur, what is south of the bedroom?
12) In Calixto Island, what do you trade with Jack?
13) What is south of the den in Keys of the Wizard?
14) In Final Mission, what is the soap used for?
15) In Black Sanctum, what does the woman's note say?
16) Name the tavern in Williamsburg.
17) In Barons of Ceti V, what task do you perform for Baroness Green?
18) In Return of the Ring, how do you get the space unit?
Entries to Pauline Hampson, 10 Cherry Lane, Lawton Heath, Alsager, Stoke O/T, Staffs. by 15th Jan 1986. A prize (not a blankety blank cheque book and pen) will be awarded so have a go even if you can only get a few answers.
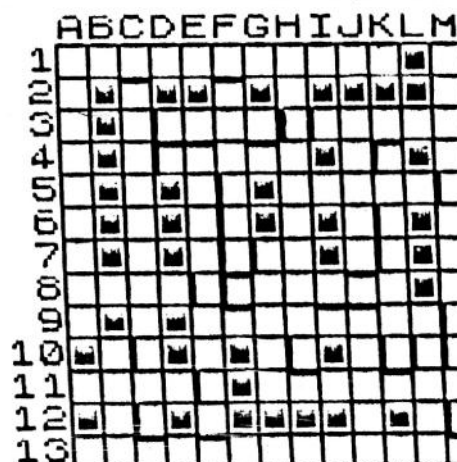
XWORD No.6 ANSWERS

Across: 1C) Part 1H) Fuse 2I) Smash 3A) Nocturne 4A) Anvil 4G) Bolas 6E) Lodestone 6A) Spider 8I) Siren 10C) Interface 11D) Tentacles 13C) Somnambulist
Down: A1) Ulna A6) Justify C7) Pining D1) Anti D5) Verdant F5) Roar F9) Venda I1) Useless I8) Stack K5) Boer M1) Shifted nought

Winner of X-Word 6 was Martin Denman. Just to keep up the suspense, I'm not saying what the X-Word 7 prize will be...Wait and see!.

CROSSWORD No.7

Across 1A) What QL supposedly stands for 3D) A fish 3I) Base 8 4D) Abrasive soft drink 5H) Long military march 8A) Not very bright 8F) Greek sun god 9E) Superlative 11A) Child without home or possessions 11G) Grotesquely terrible 13A) A creation of the mind in which reality does not exist

Down A1) Hunchback B10) Facts and figures C2) The red colouration in blood E4) Ket producer F2) Disc drive producer G7) memory which can be programmed and erased H1) You might find the shrunken scientist here J3) Small piece of bread J9) A religious festival K4) Chemical used for weight ... L9) freight M1) heavenly body visible in 2062

M/C GRAPHICS FOR BEGINNERS..JOHN MARTIN

This month we'll discuss keyboard input. There are some ROM calls which can be used to check for keys being for pressed, ie. JSR 48181 which returns the ASCII value of the key pressed in accumulator A, or 0 if no key is being pressed. This however doesn't allow for auto repeat, here we shall show how the keyboard can be read with auto repeat.

The table below shows how the keyboard is wired, you will see that each key is connected to one wire of the input port ($FF00) and one wire of the output port ($FF02), hence we can look at the table and see that the letter 'X' is connected to bit 5 of the input port and bit 0 of the output port.

```
                    0   0   1   2   3   4   5   6   7
                    1   8   9   :   ;   ,   -   .   /
Input               2   @   A   B   C   D   E   F   G      en=Enter
Port                3   H   I   J   K   L   M   N   O      sp=Space
$FF00               4   P   Q   R   S   T   U   V   W      cl=Clear
                    5   X   Y   Z   ↑   ↓   →   ←   sp     br=Break
                    6   en  cl  br  ↑   ↓   →   ←   sh     sh=Shift
                    7   *JOYSTICK  ANALOGUE  IN*
                        0   1   2   3   4   5   6   7
                          Output Port $FF02
```

To see if 'X' is being pressed, write a 0 to bit 0 of the output port $FF02 and read the input port $FF00 to see if bit 5 is equal to 0:-

```
        LDA #%11111110    Write 0 to bit 0
        STA $FF02         of output port
        LDA $FF00         Read input port
        CMPA #%11011111   Is bit 5=0 ?
```

If 'X' is being pressed accumulator A will equal the binary number 11011111. Therefore the program to read key 'X' is :-

```
        ORG $3000
        LDA #%11111110
        STA $FF02
        LDA $FF00
        CMPA #%11011111
        BNE NO
        LDA #$01
        STA $2000
        RTS
NO      CLR $2000
        RTS
```

Assemble this then run the following basic line :-
```
    10 EXEC &H3000:PRINT PEEK(&H2000):GOTO10
```
You can see that pressing 'X' will produce a 1 on the screen and releasing the key produces a 0. To check for other keys, use the table and change the binary input and output numbers.

COMPETITION RESULT

The winner of the Datapen competition from the last issue is Alan Cook of Newton Mearns, Glasgow. We'll be printing the three best entries. Here's Alan's.....

```
1 IFG=0 THEN PCLEAR8:CLS1:F=1:GOSUB4:F=0:CLS1:W$="BAGFEDCBBBBB":L$="BAGFEDCCCCCC
":DIMA(6,6):R=RND(-TIMER):PMODE4,2:COLOR5,0:PCLS:DRAW"BM20,20;NU3ND3NL3NR3NE3NF3
NG3NH3":GET(17,17)-(23,23),A,G:S=1 ELSEINPUTA$:IFG=1THEN2 ELSE RUN
2 SCREEN1,1:PCLS:X=4:Y=96:D=1:LINE(4,3)-(250,187),PSET,B:DRAW"BM250,85;C0;D20;C5
":FORI=1TOS*4:X1=RND(220)+5:Y1=RND(170)+5:PUT(X1,Y1)-(X1+6,Y1+6),A,PSET:NEXT:DRA
W"BM0,96":PLAY"T15O2L4CDEFGAB"
3 X=X+1:IFX=255 THENW=1:GOTO5 ELSEI$=INKEY$:IFI$=";"THEND=1:PLAY"C" ELSEIFI$="@"
THEND=-1:PLAY"B":'3D STAR DODGE BY ALAN COOK.     NO NEED TO UNPLUG YOUR DOS.
        CHANGE CONTROLS BY EDITING      LINE 3. FULL INSTRUCTIONS     IN THE PROGRA
.M.
4 IFF=0 THENPSET(X,Y,5):Y=Y+D:IFPPOINT(X,Y)=5 THENW=2:GOTO5 ELSEPSET(X,Y,0):GOTO
3 ELSEPRINT@75,"star dodge",,," DODGE THE STARS TO ENTER"," THE GAP AT THE
OTHER SIDE.":PRINT@232,"up - @  down - ;":PRINT@295,"ENTER TO START ";:INPUTA$:R
ETURN
5 IFW=1THENPLAYW$:G=1:PRINT@170,"well done";:PRINT@226,"PRESS ENTER FOR SCREEN";
S+1;:S=S+1:GOTO1ELSEG=2:PLAYL$:PRINT@170,"you failed";:PRINT@226,"YOU GOT THROUG
H";S-1;"SCREENS.";:PRINT@259,"PRESS ENTER TO RESTART";:GOTO1
```

SOUND AND THE DRAGON ...R.A.DAVIS

Although the Dragon Basic provides easy ways of making tunes and extravagant noises for games, there has been some critisism of the quality of sound produced. I was therefore surprised to discover that with some excellent software, the Dragon is able to give sounds unequalled by most home computers, and play music in 4 voices simultaneously ranging from classical music to ragtime, and also to produce waveforms resembling most musical instruments.
The first of the musical programs I obtained was COMPOSER, from Microdeal. Even with my primitive knowledge of musical notation etc., I soon found that I could compose and save almost anything for which I could find the music sheet, and then use the result separately from the original software in my own programmes.
The COMPOSER, with it's easy to follow handbook, enables you to enter the notes as DATA statements, in 4 voices, each of a different waveform, with appropriate note lengths , and then it compiles the result into machine code, which can be saved and used by you as an addition to your Basic programmes. It also provides a facility to return to Basic at any point in the melody, so that music and words, or music and graphics ofcur simultaneously. Some of my first efforts were in fact Christmas carols, which displayed the words to be sung to each phrase of music as it played. These early efforts were transmitted by radio to other members of our Dagnet group (see the article in issue 14 .. TL), who were obligingly astonished ! As a result, many of them obtained the program, and some of their friends actually bought Dragons. In particular we were lucky enough to interest one who with his wife is a professional musician, and since then we received music ranging from Mozart, Bach and Handel to Scott Joplin, which is a pleasure to hear. It can be saved to tape as M/C or even as music if it is recorded via the MIKE cassette lead, and the quality is excellent if played via that lead into into a Hi-Fi amplifier. The second program is SHAPER. This offers the facilities not provided for by COMPOSER, and very good they are too. Here again, you are able to save your results and use them seperately in your own programme using the routine kindly provided. This differs in so far as you may compile a library of up to 100 sounds of each and every waveform imaginable, with varying volume, length, rise and fall,emphasis, etc.. You can use this menu-driven device to produce any required sound effect, of any length simultaneously with action if needed. There are other interesting uses which seem to me to be possble, although I havn't had time to try them out yet, one is to make 100 note keyboard for piano, flute, banjo or any other instrument, to be played from the keyboard or within a program. This software provides for one voice at a time, but warbles, slews etc., can be made as the demonstration library shows. They even include a spare blank tape for you to use to save your own libraries.

BROTHER HR5 PRINTER .... H.McDONALD

As I needed a printer, which had to be cheap, I had a look at the above. I have had this for about a year and since then the price has dropped to around 99.00, much less than I paid.
The printer can be used with thermal paper or a thermal ribbon, both British and American characters are supported, pound or hash and normal or slashed zero. There are 2 line pitches, 1/6 or 1/9 inches and the line feed can be disabled (I do this and then POKE 330,2 whenever I need line feed, as I do most of my work under Flex which has and auto line feed, this is more convenient). The Graphics are excellent, the screen dump I use is modified from an Epson which is very similar. I have no hesitation in recommending this printer to anyone who is tight for cash (who isn't!).

Recruiting drive!..

I keep hearing from some of you about "other Dragon owners" that you know, who are NOT Group members. WHY?????!...The bigger the membership, the more material we get, and the more interesting and useful we can make Update, so if you know a Dragon with an owner who hasn't signed up....recruit 'em!. OK?. Paul.

OS9 AND PIPES (part 2)...JASON SHOULER

HOW TO USE PIPES

Although the OS9 manuals supplied by Dragon Data are fairly comprehensive and well written, only a fleeting mention (about 2 pages) is made of piping. As Dragon Data are no longer with us, the following is written to help both newcomers and anyone else still struggling to get to grips with this most exiting and powerful feature of OS9. Pipes can be used with any OS9 program module which has been generated by such languages as Basic09, Pascal or 'C'. In the following example I'm going to use PACKED Basic09 programs and it's most important to realise that the 'RUNB' system module must reside in the command directory whenever Basic09 modules are used. The first listing is a very simple program which ideally demonstrates just what can be done with a combination of input/output redirection and pipes.

```
    PROCEDURE pformat
    DIM word:STRING[14]
    WHILE EOF(#0)=FALSE DO
     READ #0,word
     PRINT word,ENDWHILE
    PRINT
    END
```

Even if you're only conversant with the Microsoft of the Dragon, it should be clear that all this procedure does is to convert the 'PRINT' commands to 'PRINT,', i.e. tabs to the 16th column. To anyone not used to the concepts of OS9 or UNIX, this little routine may seem quite useless. Yet when combined with input/output redirection, it can be quite useful, For example, by redirecting input to come from a disc file (such as the SUPP file of the speller checker) and redirecting output to the printer, you'll find that you get a nice neat five column (80/16) printout- a very useful utility.

    pformat <supp>/p

The basic shell of this listing can be used to hold as complicated a routine as you care to devise. One of my favourites is to write word search programs where a word is input from the keyboard but is only printed if it fulfils certain criteria. Assuming that you've called this program 'findword', then the following command line may be invoked:

    spelldcm dict ! findword ! pformat >/p

What it does is this. The Stylograph spelling checker decompression module will decompress the spelling dictionary (which would normally take up something like 400k of disc space) and sends the output direct to the input of the 'findword' module. When this module finds a word which satisfies the criteria you have set then it, in turn sends it's output direct to the input of the print formatting module which prints the resultant words in five column format on the line printer. Not impressed ?? Well you can always bracket the entire process and run it as a background task with:

    (spelldcm dict ! findword ! pformat >/p) &

Which will run everything as a background task, allowing you to get on with something useful !

It is often said that lack of memory is a major problem with OS9 and it's certainly true that there are many tasks that OS9 could handle which it is unable to due to this. Yet when you think about it, this is stating little more than the obvious, for any multitasking system must by its very nature eventually run out of memory. The above example does not impose a large memory demand on OS9, but it does require a large ammount of disc space and it is this, and not available memory, which is the limiting factor for users with 40 track drives. The point is this, if a process is in operation then no attempt must be made to change any discs which may be used by that process. Quite often the particular utility you would like to use is on a different disc to the one you're using, but since you're unable to change discs, you're forced to wait until all the background tasks have finished before proceeding. Of course, if you're fortunate to have 80 track drives then this is less of a problem.

WRITING PIPABLE MODULES

Procedures to be used as pipe filters must be written in a loop-like structure such that the program always requests an input. There is nothing to stop you from using an infinite loop - OS9 will always break the loop when it runs out of data - but a much neater way is to exit when an EOF is received on the input path. It may seem strange to expect an EOF from the keyboard but under OS9, this is quite normal, being obtained by Escape (CLEAR-BREAK). You may also notice that I've used READ#0 (the '#0' means from the keyboard) instead of INPUT. If INPUT is used, unwanted prompts such as the question mark will be generated as output and when a number of programs are piped together, you can end up with a whole stream of '?' as the final output. Using READ#0 overcomes this problem but still allows data to be input from the keyboard.

If anyone wishes to contact me in connection with OS9 then please do so. You should either phone on 0202-722599 or write c/o Paul.

CAD 34. (CCS)...Neil Scrimgeour.

When I opened up this package, I wondered what CAD meant. It stands for Computer Aided Design, in other words it's an art program. CCS is a new company run by a Mr. Croucher who I think is the same Mr. Croucher who co-ran Automata until its recent break up.(?). The best of luck to him.

There isn't really a lot to say about art programs except what they offer in terms of facilities. The cursor is controlled by the joystick and all of the Dragon graphics commands are available except for PSET and PRESET. You can also set the size of the brush and have text on hi-res, more of which later.

The program comes with a little booklet about twice the size of a cassette. Presentation is not CCS's strong point as the booklet and cassette inlay have been done with a dot matrix printer. I wouldn't knock off any points for that as it's not important, especially as you'll be hard pressed to find it in a computer shop. The program is all in M/C but it doesn't auto run. So what is CAD like?. Well, it's probably best summed up as a useful art program. As I said, nearly all the options can be found in the Dragons graphics commands, but the program does go futher than most art packages. The text can be in PMODE 3 or 4 but the design of the letters is not outstanding, just adequate. One annoying thing is that the cross hair vanishes occasionally, this is due to the Dragon more than the program but there are ways of avoiding this and the author hasn't used them.

Overall, at 4.95, it's probably the best value for money art package available. A great plus is that it's available on disc for 7.00. However, if you want to draw a graphics screen as good as some title screens then the only way to do it is with graph paper, a pencil and a Basic program. that is until someone releases a Mouse package for the Dragon. how about it Compusense ??

DRAGON 64. EDGE CONNECTOR 32-CTS SIGNAL

On 64's, this signal is active only during a read from address range $C000 to $FEFF, whereas on 32's, it is active for both read and write. This prevents adding RAM to a cartridge unless one wishes to discard the CTS signal which may not be desirable, as in my case.

OK, I hear it, why add extension RAM to the expansion port under control of CTS which would only be of use in the 32k mode ? Just type EXEC and I've got the full 64k. Simple, I have a Delta DOS cartridge which is designed to function in 32k mode and expects to find Basic at $8000-$BFFF and to use the 64k mode would mean transferring the DOS from one mode to the other still at $C000-$DFFF, this would overwrite half of Basic which in a 64 resides at $C000-$FEFF. The idea of doing this would require the 32's ROM to be copied into the 64'k map at $8000-$BFFF. I don't know if this would work as some of the set up parameters would be different. Last but not least, RAM in the expansion port would be a memory clock which would be common to both 32 pages when using Bob Hall's 'Swopit' facility and I'm sure this has some good implications into which I
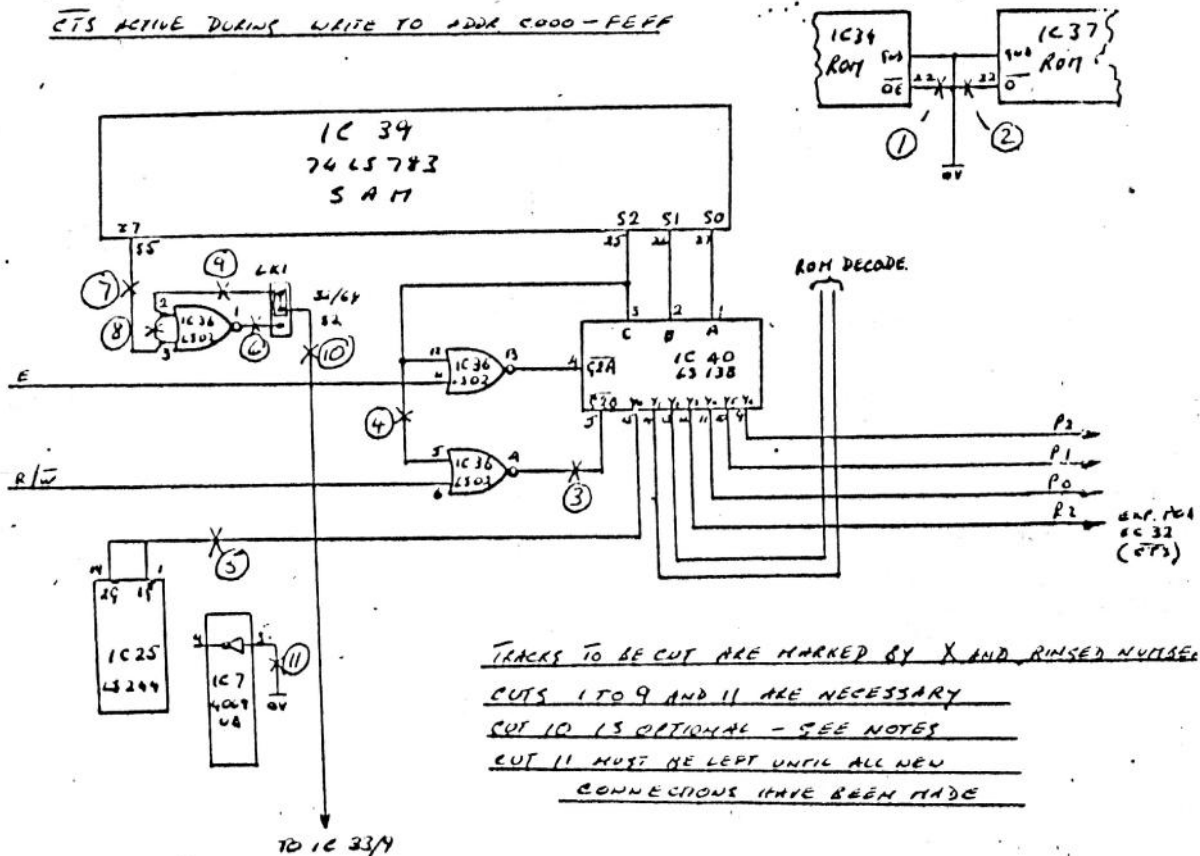
than't venture.

Having expounded some feeble reasons for avoiding software and modifying hardware, lets look at the physical picture.

A Dragon 64 with a Delta cartridge uses the Dragon in 32k mode if Delta DOS is running. The DOS occupies addresses $C000-$DFFF and makes full use of Basic at $8000-$BFFF, this leaves nearly 8k free ($E000-$FEFF) for which there is an empty ROM socket on board. Rather than be tied to using a ROM within this space, I fitted an 8k CMOS RAM chip (6264) so that an 8k clock is programmable and can be there for house utility programmes while working on a main programme in the normal 32k area. I don't know the layout of Dragon DOS but I imagine a similar situation would exist. Another item which is food for thought is that Delta DOS nicks the top 1.5k of RAM from the 32k for it's own use (Dragon DOS uses 1.5k from $0600-$0BFF and resets the start of graphics to $0C00 TL) hence encroaching on the space used by many cassette programs. It may be possible to redirect the DOS into the new 8k block, thus leaving the 32k as it was before the DOS was fitted. This idea is attractive but for the fact that any solution would require a new ROM chip to be blown. Provided the DOS could be disassembled and understood, the effort would be wothwhile but it will be some time before I'll be able to do it as I lack the essential ingredients, namely a disassembler and knowledge of assembly language. Efforts are in hand to correct this situation but if anyone out there has any hints, clues or actual knowledge of the DOS then please sing out loud and clear.

This article will be continued in the next issue ...... TL

DRAGON 64   MEM MAP DECODE FROM S0, S1, S2.

CTS ACTIVE DURING WRITE TO ADDR C000 - FEFF

IC 34
74 LS 783
S A M

IC 40
LS 138

ROM DECODE.

TRACKS TO BE CUT ARE MARKED BY X AND RINSED NUMBER
CUTS 1 TO 9 AND 11 ARE NECESSARY
CUT 10 IS OPTIONAL - SEE NOTES
CUT 11 MUST BE LEFT UNTIL ALL NEW
CONNECTIONS HAVE BEEN MADE

TO IC 33/4

ELECTRONIC AUTHOR (Smithson Computing)

The Electronic Author has a number of points which make it not only an extremely powerful word processor, but also very easy to use and to my mind, very good value for money. Although it was originally produced as a tape-based utility, it was done in a way that made it even more reliable than the Dragon's normal tape handling. The tape-based E.A. has a verify command to check files that have been saved so that you don't lose anything before beginning new text or switching off. The verify will give a count of the number of blocks saved and the number of errors, if any. On loading, the E.A. gives a count of blocks as before, but any 'duff' blocks in the text file are loaded and '?' inserted where they occured. The result of this is that instead of getting I/O errors, and the tape stopping, the entire file is loaded and you can fill in the missing text from memory (your own).

Altogether there are 70 commands available, 24 are edit commands, these are used from the command window, which occupies the bottom 4 lines of the screen, and is entered and left via the <BREAK> key. The edit commands allow for block move, delete, mark and unmark, find/change/delete, insert spaces (differs from single insert), load and save, reverse block/text, 51 and 64 chars per line and work space (remaining memory and word count). The auto repeat is effected by the <CLEAR> key which causes the last key to be repeated; this is very fast and can fill the entire screen in about 15 secs. although the rate can be set from 1 (fast) to 255 (very slow). For the cassette user, file names can be any length but on disc they can only be 8 chars. long. All of this is available without having to step through menus. That is, you edit as you go, typing over, inserting, deleting, etc..

With all this and more to come, how much room for text you ask. About 17.5k or six pages of compact text is the answer, and more if there are lots of headings, and spaces. The operation doesn't slow down as the text space fills, i've tried filling the thing up with blocks of characters to see, everything worked just as fast.

Now for the interesting things about this 'little' program. The formatting commands are entered in the form Hash, code-number, including one to change from the hash to another control character if required. For people with fancy printers, there are controls for most print types and a blanket code that allows you to send any command that your printer will recognise. What you can achieve with this last command seems only limited by your imagination and the printer. There are 34 basic (oops) formatting commands, but the last command increases this to whatever number your printer can use. These commands are entered throughout the text as required although some rules (not many) have to be observed. The E.A. will allow you to right justify, and allow you to centre, change to double width and back again, all the spacing will be taken care of although if you change to condensed print, you will have to specify the new number of chars per line but once you get used to that, you do it automatically. It took me about one afternoon to get used to E.A. It will not take care of wordwrap when used in literal mode, the idea being that you use the screen to design your own layout so that what you see is what you get.

Another impressive feature is the find(change)/string1/string2/ command. When selected, the first occurence is found and is displayed in the centre of the screen with a small amount of text; pressing 'X' will exit the routine and the text will be retuirned with the found text at the top of the screen. If instead you press 'n' the routine goes on to the next occurence. This also has a delete string option in which any or all occurences of a string may be deleted (or changed) at one go. The execcution of these routines like all the others is very fast. There are a total of 11 direct commands to allow the moving of the cursor around the text screen and to make single or single line insertions or deletions; if you want to insert lots of characters, there's a special edit command for this purpose.

The disc version does not retain the cassette save or verify routine but you can still load or append files, so your cassette files are not lost. When using

the disc, all the DOS errors are recognised and if they occur they will be displayed, pressing any key will then return you to the command window. If the file already exists then pressing 'R' will replace it with the new one, anything else takes you back to the command window.
The Electronic Author is advertised as THE word processor for the Dragon (well Outside Flex and OS9, it probably is. I've also found that it doesn't 'hang' if you forget to turn on the printer ....Barry Johnson

THE THIRD 6809 SHOW ... LEE COOKE

I went to the show on the saturday and the first thing that surprised me was how empty it was. Stands that had been booked were sitting idle, while others were not entirely devoted to the Dragon or Co-Co. Computer Bookshops were using the show to clear out some old lines and the 'people on the Computer rentals. stand were entertaining offers for the whole stand as seen.
However, not all was lost, the 68 Micro Group were providing good data on the devices in the 6800-68000 series and circuits to 'build it yourself'. Modem house were giving demonstrations of a Prestel system for the Dragon and advertising Micronet 800. Salamander software were showing most of their old favourites including Franklins Tomb and turtle Graphics while our User Group stand had a FORTH package which was selling very well.
A welcome sight was the large Tandy stand with 16k Co-Co 2's selling for as little as 89.99 and a very large range of accesories, tapes and cartridges. Some stands were companies who have previously had reviews in this publication and more will probably follow. The business and technical side of the 6809 were represented by Micro Concepts with their Microbox 2 and system 2900, GMS with their 6809 boards (and some BBC products ?) and Compusense who were trying to convince everyone that Flex is the be all and end all of operating systems!.
Software wise, Quickbeam were selling a 'rip off' tape (terrible), but my "Game of the Show" award goes to Blaby for Cosmic Crusader, (price 3.99,) it's addictive good to relax to and the music is great! Microdeal had released 4 new games and various small groups were there with other general purpose products. My hardware award goes to Race Electronics for the (defective) Dragon 64 boards they were selling and the EPROM boards.
Thanks to Graham Strong for helping me where he could, to Compusense for being naturally pig-headed, and to Howard Heath for arranging for the Group stand.

DRAGON BULLETIN BOARD SERVICE

DBBS runs on a Dragon 64 with a Compusense Dragon+ expansion board under Flex. It is currently the only 24 hour bulletin board dedicated to Dragon users and is totally free of charge.
DBBS runs at 300/300 baud, 8 bits, no parity, phone no is 0376-518818, system operator is Brian Lloyd.

THE END BIT......

Just a short bit this time as I havn't left myself much room (less of the cheering if you please). Could you please make sure you send all your competition entries and subscriptions to Paul, not me, otherwise I just have to send them on and that wastes time. Secondly, sorry about the lack of the bulletin board list, I've just got an updated copy from Gary and it's taking time to check. It will return next month. ....Tim Lomas.......London......
December 1985

Classified & Special Offers Page.

TOUCHMASTER SPECIALS:-

Dynacalc..............25.00	Cash / VAT............20.00
Basic 09..............20.00	Stock Recording.......25.00
RMS...................25.00	Pascal................30.00
Edit / Assembler......30.00	C Compiler............30.00

Stylograph (+Spellcheck / Mailmerge)..................35.00

The Touchmaster Touchpad, complete with all leads and Software.49.50 inc. All orders direct to Touchmaster Limited. PO Box 45, Port Talbot, West Glamorgan, mentioning the Group.

5.25" DISCS. SS/DD.......14.50 per box. DS/DD.......15.50 per box. Top quality 40 track discs at roughly 30% less than the usual price. All prices PLUS 15% vat, but inclusive of postage.

We've still some tractor feed self adhesive labels.....4"x1.5", at the old price of 3.00 per 500 or 5.75 per 1000 (+50p.postage). Orders for discs and labels to Paul Grade, cheques payable to the Group.

DUCKWORTH COMPUTING: Duckworths are offering members a 50% discount on the following books:-

Pocket Handbook for the Dragon..usual price 2.95....our price 1.50. Exploring Adventures on the Dragon:-usually 6.95....our price 3.50. Dragon Programs, by Nick Hampshire:-usually 6.95....our price 3.50. There is also a cassette of Adventures on the Dragon usual price 7.95, but only 4.00 to you.

All orders to Paul Grade, cheques made payable to the Group.

DRAGONDOS: Peter Williams of Computil is offering to reblow your Dragon DOS chip to include the correction patches published in Dragon User for only 3.50 inclusive. Send your chip and a cheque to: Computil, 22, Grove Park, Burbage, Hinckley, Leics.

32 to 64K UPGRADE INSTRUCTIONS: Bob Hall has written a comprehensive manual on converting your 32 to 64, and copies are available to members at 2.00 each. Orders to Paul Grade. Cheques payable to the Group.

32 and 64 CIRCUIT SHEETS: We can now supply photocopies of these for 1.00 each. The 32 sheets are applicable to the series 2 board ONLY.For other types please phone for details.

BACKDATE UPDATES!: We can now supply copies of back issues of Update. Please contact John Cox at 3,St.Peters Road,Peters Rd. Portslade, Sussex.(0273-422492) or C.J.Channing at 63,Churchfield Way,Whittlesey, Peterborough.PE7-1JZ ...(0733-208409) for price and availability.

WANTED!:Cheap DOS cartridge, working or not, even incomplete will do. Please phone Paul Grade.

80 TRACK DRIVES, double sided full height (Micropolis), uncased......90.00 inclusive.   Contact Ted Bacciarelli at 189d, Balham High Road, London. SW12.

CROUCHER COMPUTER SOFTWARE.

C.A.D.34: Design screens with ease with this Computer Aided Design program. All functions controlled from the keyboard without need for a menu, leaving the full screen area for use. Choice of Modes 3 or 4 with the following facilities: Lines, Boxes, Circles, Arcs, Fill, Block move, and Paint (with a choice of 5 brush sizes and 9 colours in mode3 and shading in mode 4). Four sizes of text, and more. Designs may be saved to tape or disc for later use with CAD34 or with your own programs...Price (disc) 7.00. (tape) 4.95. Members discount of 1.00 er program.

CANOE: How far can you paddle up river?. First tackle the gates, succeed in time and move on to rough water and rocks to challange your skill and power!. 100% m/c with hi-res graphics and sound. Tape 2.95...Disc 5.00. Members discount 1.00.

Order direct from:-C.C.S. 14,Hiltingbury Road, Prospect Farm, Havant, Hants.

APOLOGY FROM JOHN COX...I must apologise to all of you who bought my DISC EDITOR at the Show....I somehow managed to put the wrong version of the File Copy routine on the disc! I've had no complaints, but if you have any, or any queries please phone me on 0273-422492. Thank you. John Cox.

Please note that we are "open all hours", and that includes Christmas!, so if you spill your drinks down the Dragon, or just get bored with it all, feel free to phone. You know the number..Worthing 207585. Paul.G.

. . . .and still more specials!.

FORTH OS:- We now have a REAL FORTH system to offer at a tenth of the price of some of the "language only" tapes!. This is an OS disc that you can BOOT into either a 32 or 64, and in addition to the usual FORTH compiler it includes a Turtle Graphics mode and an 85 (yes 85) character per line word processor!. The system is written by John Payne, and is available ONLY through the Group at the moment, and costs a mere 8.50 inclusive of postage. The current version is for Dragon DOS only, but a Delta version is expected to be ready soon. Orders to Paul Grade. Cheques made payable to the Group.

OS9 UTILITIES:- You can now buy a set of eight OS9 utility routines, as demonstrated at the Show. These include a line-feed filter to overcome the double spacing problems with Mailmerge, and many other useful routines. Available to Members at 5.00 (non-Members 10.00). Disc and / or further information from:- J.Shouler,70,Victoria Road, Parkstone,Poole,Dorset. BH12-3AE. or phone 0202-722599.

DRAGON DOS DISC EDITOR / MENU:- This disc utility is a must for all Dragon DOS users. It is simple to use and has two operational modes (Examine and Edit), inbuilt instruction pages which may be called at any time, and it will read and edit discs from most other systems. It will allow you to reclaim a KILLED file (provided it has not been overwritten), and access and change files directly from disc. No more corrupt discs!. Also included is DISC MENU which you can load and save into any of your DOS discs. When RUN it will read the directory and list the files 26 at a time on screen. It is a single key entry system, which saves wear on the fingers!, and you can also change it around to suit your own needs...e.g. a disc to disc copying routine, or for killing files, etc. The disc comes complete with instructions. Further information from John Cox, telephone:-0273-422492. Price 6.50 inclusive. Orders to Paul Grade. Cheques payable to the Group.

16K RAM CARTRIDGE:- The RAM cartridge has the following features: Full battery backing (Battery life up to TEN Years). Write protect switch to protect your data. Power on LED Lights when computer is powered up. Optional FIRQ/CART button Allows program in cartridge to be executed in one simple move. Any cartridge available for Tandy or Dragon computers can be saved to tape in conjunction with the RAM cartridge which will act as though it were the original.

The RAM cartridge can also be used to store data or a program of your own,it is possible to use the cartridge as a RAM disc.

The cartridge is available in four versions,these are:Bare board,supply and fit the components yourself,Cost 15-00

Board and Bits,all components supplied,you just solder them onto the board,(FIRQ/CART button NOT supplied) Cost 35-00

Built cartridge,this is ready to go as soon as you get it,but this version does not include FIRQ/CART button   Cost 40-00

Complete cartridge,this is as the above but includes FIRQ/CART button   Cost 43-00

All of the above are available at the prices shown from the following address:- G.Elkin,Jedarodwin,Newport Road,Great Bridgeford,Stafford. Please make cheques payable to: G.Elkin.Prices shown are pounds sterling and include VAT/p&p all inquiries to the above address.

WANTED!...Any quantity of Dragon OS9 software. It doesn't matter whether it's new or old, but it MUST have either original manuals or good photocopies. Will buy, or might swap for HP41C. Telephone David Craggs on 01-597-7574.

PEAKSOFT SPECIALS:- Dragon external power supply units complete with lead and "D" plug. Price 14.95 post free.

Peaksoft "Pro-Stick (potentiometer) joysticks 9.95 per pair. Quickshot 2's at 12.95. "Vulcan Gunshot's" at 13.95. Trojan Lightpens at 14.95. Dragon / Tandy cassette leads and areial leads at 2.50 each. All post free.

Backdate "Dragon User" magazines...1984 Feb/March/May/July/November/December. 1985 Jan/Feb/March. All at 50 pence each plus 50 pence per order p&p.

Sunshine Dragon books: Advanced Sound and Graphics, Artificial Intelligence on the Dragon, Dragon Gamesmaster, Working Dragon, and Dragon Trainer...Total value over 30.00, yours for 6.95 post free.

All the above available direct from Peaksoft, 48,Queen Street, Balderton, Newark, Notts.NG24-3NS. Access and Visa card orders can be telephoned on 0636-705230. Please mention the Group when ordering.