

The Newsletter of the National Dragon Users Group

DRAGON



UPDATE

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The Gaffer's Bit.....

Here we go again, yet another fond farewell to an Editor!. What can I say?. Poor Barry, he seemed like a nice boy, kind to Dragons, honest (well, fairly!), happily trying to grow up into the sort of person his parents told him not to associate with, when suddenly he was struck down by the dreaded Education Virus, from which few ever recover fully. The Government should give more funds to researching a cure for this terrible disease, which can, in a matter of a few months, reduce a normal, cynical, disbelieving and intelligent person into a sub-human wreck, believing unquestioningly the moronic utterances of politicians, teachers, careers advisers, and long dead writers who should have had the decency to die before learning to write at all. Help stamp out Education!. It can not only seriously damage your sanity but even worse, it can deprive User Groups of the services of good Editors!. Anyway, the issue of forms B1 and UB40 does NOT require a BA.

Well, as of now, the Editor of Update is Stephen Wood, who assures me that he has no intention at all of allowing himself to be educated, and who appears to have all the most desirable qualities for an Editor grovels well to superiors, is completely amoral, mercenary, sarcastic, and is expensive to

bribe ... what more could one ask without getting nicked?!. However, one thing he still lacks is material to use in putting together future issues of Update, so PLEASE send him some unless you want to be reading blank pages next month!. His address is: 52, Downsway, Springfield, Chelmsford, Essex. CM1-5TU.

Well, I'll save any other comment for the "Late Bit" and let you get on with Barry's ultimate masterpiece. Many thanks for all the work, Barry, you've done the job VERY well, and I'm sorry you won't be continuing.

Paul G.

AND IT'S GOODBYE FROM HIM.....

Yet another change at the top in the high risk, high flying world of Dragon Update. Yes folks, the time has come for me to relinquish the esteemed post of Editor of your favourite newsletter.

You'll understand that this is not due to a lack of commitment or anything so sinister but due to the simple fact that I have what I consider to be pretty major exams (despite what anyone may say) and I don't really have time to keep the magazine going too.

What this means is that a Mr Stephen Wood will be taking over from the next issue. I hope you will give him as much support as you have given me in my short reign. I would also like to take this chance to thank those of you who are kind enough to write for Update and to ask you to keep it up. I don't know if I will be making future guest appearances in these esteemed pages but if not then.... Goodbye (Sob sob!)... Barry

HENCEFORTH (5) BOB SMITH.

Last time we began to look at DOUBLE PRECISION numbers, and we now have 16 words available for direct manipulation of these numbers. There are 13 already provided in John Payne's FORTH. These are:-

D+ D- D. D.R DABS DNEGATE DPL M* M/ M/MOD S->D U* U/

The explanations for these are to be found in the DRAGON FORTH manual (DNEGATE is called DMINUS) or any of the standard text books about FORTH. The remaining three words, 2DROP 2DUP 2SWAP, were defined last time.

This time I'd like to define a word that as far as I know is unique to NDUG. This is a word that compares two DOUBLE PRECISION numbers and leaves 1 on the stack if $d1 < d2$, 2 if they are equal, and 3 if $d1 > d2$, thus :-

D-CMP d1 d2 --- n1

D-CMP makes use of one of our own defined words - PICK - and you should make sure that PICK is loaded before loading D-CMP. Using D-CMP will often entail duplicating DOUBLE PRECISION numbers that are already on the stack, and this means that we need three more words to help us. These are 2OVER 2PICK 2ROLL and they will be defined next time.

SCR # 4	SCR # 5
0 (compare 2 32 bit nos.)	0 (compare 2 32 bit nos.)
1 : D-CMP (D1 D2 --- N1)	1 IF 1 (D1<D2) ELSE 3 (D1>D2)
2 3 PICK 2 PICK = IF 4 PICK 3	2 ENDIF ENDIF 4 0 DO SWAP DROP
3 PICK = IF 2 (D1=D2) ELSE 4	3 LOOP ;
4 PICK 3 PICK < IF 1 (D1<D2)	4
5 ELSE 3 (D1>D2) ENDIF ENDIF	5
6 ELSE 3 PICK 2 PICK <	6
7 -->	7 ;S

A couple of bugs got into HENCEFORTH (3).....

SCR #150 to SCR #155 should have a continuation ("-->") marker at the end of line 7. On SCR #156 the last line should end "ENDIF ; IS".

Also on SCR #155, lines 1 & 2 should read...

1 ELSE 13 = IF MYSELF ELSE DROP EN

2 DIF ENDIF GCHK REPEAT 2+ DIN NFA

Hope these didn't cause too much inconvenience....Barry

CROSSWORD NUMBER 29 - ANSWERS.**Across:-**

1a) Cram. 1F) Carlisle. 3A) Time Lord. 4D) Bloat. 4I) Class. 5A) Circus. 5H) Carrot. 6I) Peril. 7B) Brigadier. 9A) Rhubarb. 9J) Oslo. 10E) Pirate. 12A) Tile. 12G) Sharpen. 13A) Smack. 13G) Hay.

Down:-

A1) Stockmarkets. C1) aemirC (Crimea). D5) Cribbage. E4) LungE. E10) Pick. F8) Bridge. G1) Abracadabra. H5) Chile. I2) Escape. I9) Stray. J10) Ears. M2) Scar. K8) SHAPE. L2) Ass. L8) Glue. M2) Mistletoe. M1) End.

Sublim routine competition.

Not at all a good response to my little competition, in fact only two entries, one from Alan Cook and one from R.A.Davis. What's the matter, don't you WANT to make money?!. Anyway, Alan's entry was the more efficient of the two, so a cheque for a tenner is on its way, Alan.

(Before you say it, I KNOW Alan manages to win most of the programming competitions, but there's no bribes or blackmail involved, and we're just good friends!. I'll be printing his entry in the next issue so you can judge for yourselves.). Paul.

The Case of the Missing Crossword.

I don't know what has happened to Crossword 30, it just hasn't arrived, so it looks as though you'll have to wait until next month. Sorry. However, winners of No.29 were Richard Nash and Eddie Freeman (again!), and prizes are on their way.

DRAGONART LIBRARY

The last few months have been quite eventful down here at the NDUG DRAGONART GRAPHICS LIBRARY. Several interesting entries were received in the summer competition for the best graphics screen received at the Library, including a couple of PMODE3 screens from Heather Cartwright, which were colourful and atmospheric. Both are now in the Library.

The outstanding screen, however, and the one which showed the most artistic merit, was an entry submitted by Eddie Freeman on behalf of the computer artist Derek Bonham. So Derek of New Boughton Green, Northampton was the winner of the Trojan Light Pen kindly donated by Philip Beed.

The winning screen is reproduced here and you will see that Eddie, who sent in the winning entry in all due modesty, was the subject of the cartoon. Just the suggestion of a hook to that swing Eddie?

I like to know how the finished effort on the screen was accomplished and Derek tells me that the graphics were reproduced from an original cartoon of Eddie in the time-honoured manner advocated by Tony Davis, in other words pixel by pixel. Tony wrote his program (DRAWEZEE) to facilitate the process of reproducing a drawing drawn on graph paper on to the Dragon screen.

Philip Beed, on he considers to be a his drawings down on they will appear on the them on to a Touchmaster tablet is inclined to rough edged sketch one of the Library can be obtained from the donation of at least £1.00 + postage) and with this the drawing, smoothing out magnification facility to product.

Those without a could probably do the same on to polythene, using tipped pen or chinograph of you could easily looking artwork using



the other hand, uses what speedier method. He puts paper, the same size as screen and then traces Graphics tablet. This produce a somewhat jagged, screenwise. Then he uses programs DRAGONDRAW (which Library on making a to the Photocopier Fund, program he finishes off the jagged lines with the produce the finished

tablet but have a Lightpen thing sketching a drawing something like a fibre pencil. The more creative produce professional DRAGONDRAW direct.

There are now some 10 sheets of graphics in the DRAGONART LIBRARY, thanks to the latest contributions from Randy Longshore, one of our American members.

Talking of the States reminds me that the COCO is big business the other side of the pond and as you know the COCO and the DRAGON are blood brothers. Both spring from the same chip, the 6809. It makes me very envious to think of the vast network of Bulletin Boards in the States, countless numbers of which are either devoted to the COCO, or have a large COCO SIG on board. From these it is possible to download outstanding programs and eye-boggling graphics. Most of the graphics recently added to the Library were originally on the COCO and have been converted to the DRAGON format.

So if you're interested in Graphics, drop me a line (and a stamp) as not only do we have a selection of really first class graphics in the LIBRARY, we also have a selection of programs that will enable you to produce both HIGH and LOW-RES GRAPHICS that will add spice and that touch of originality to your own programs.

RAY SMITH

BACK ISSUE UPDATES.....

Further to my request in the January Update for someone to take over the reprinting of back issues, several offers were received, and hopefully reprints will be available once again as from next month.

Full details of price, where to send your orders, etc will be printed in the March issue, so please do NOT send orders / cheques for reprints to me as this will only cause delays. Paul Grade.

Helpline 1988

If you have queries on any of the subjects mentioned here, write to the appropriate volunteer, enclosing a stamped envelope for reply. If you need help with a subject that isn't included in the list yet, or you aren't satisfied with the reply that you get, then contact Paul Grade as usual.

FORTH: John Payne, 3, Sibiland Close, Thornbury, Bristol.

FLEX: Jurgen Mitchell, 62, Victoria Grove, Lupset, Wakefield, Yorks. WF2-8JD.

PROGRAMMING LANGUAGES AND STRUCTURED PROGRAMMING METHODOLOGY: Stan Davies, 153, Allestree Lane, Derby DE3-2PG.

GAMES SOFTWARE (MAINLY ARCADE BUT SOME ADVENTURES): Stephen Wood, 52, Downsway, Springfield, Chelmsford, Essex CM1-5TU.

M/C (EXCLUDING FLEX & OS9): DRAGON MUSIC; ARTIFICIAL INTELLIGENCE; "C" (UNDER OS9): Chris Jolly, 4, Pinehurst Walk, Orpington, Kent.

TAPE TO DISC CONVERSIONS (DRAGONDOS): Graham Smith, 3, Ashton Gate Terrace, Ashton Gate, Bristol BS3-1TA.

GENERAL HARDWARE AND UPGRADE CONVERSION PROBLEMS: Bob Hall, 22, Cumbria Close, Thornbury, Avon BS12-2YE.

WORD PROCESSING & GENERAL BASIC PROGRAMMING: F.J. Fisher, 29, Thornham Road, Gillingham, Kent.

BASIC PROGRAMMING: Ian Rockett, 2, Knowle Road, Burley, Leeds, Yorks. LS4-2PJ.

RTTY / RADIO; LISTINGS FROM INPUT MAGAZINE; SPRITE MAGIC; AMATEUR RADIO;

UPDATE ARTICLES / LISTINGS BY R.A. DAVIS: R.A. Davis, 39, Boxley Drive, West Bridgford, Nottingham NG2-7GQ.

OS9 SYSTEM AND UTILITIES: Jason Shouler, 70, Victoria Road, Parkstone, Poole, Dorset. BH12-3AE.

MODEMS, BASIC ELECTRONICS, ADD-ONS, and FLEX: Tim Hayton, 36, Laurel Drive, Willaston, South Wirral L64-1TW.

DELTA PROGRAMMING: Stuart Mills, 49, Templegate Crescent, Leeds, West Yorkshire LS15-0EZ.

DRAGON HARDWARE PROBLEMS AND REPAIRS: Alan Butler, 16, Barnston Green, Barnston, Great Dunmow, Essex.

MODEMS AND BULLETIN BOARDS / GENERAL COMMS. Gary Coxhead, 54, The Sorrels, Corringham, Stamford-le-Hope, Essex.

COMPOSER PROBLEMS:- Dave Cadman, 32, Breedon Hill Road, Derby DE3-6TG.

DRAGON/DELTA DOS PROBLEMS; OS9, BASIC 09, AND GENERAL BUSINESS SOFTWARE

APPLICATIONS: M.A.A. Abba, 55, Longland Court, Rolls Road, London SE1-5BN.

DMP 110 PRINTER PROBLEMS/SCREEN DUMPS ETC.: Dr. J. Hatton, 48, Wern,

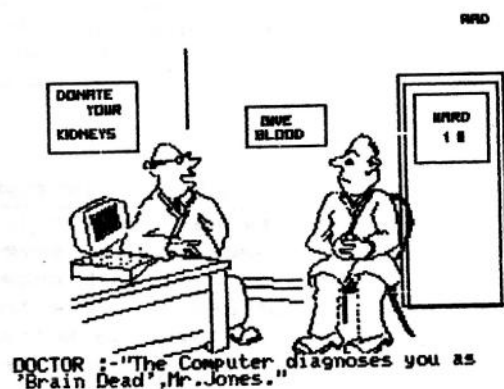
Llanfairpwll, Anglesey, N. Wales.

GENERAL PROBLEMS AND MOST REPAIRS: Steve Tate, 22, Fairfield Drive, Wormley, Broxbourne, Herts. EN10-6DY.

TAPE TO DISC GAMES TRANSFER (DRAGONDOS): Richard Boston, 257, Upper Elmers End Road, Beckenham, Kent. BR3-3QR.

How about YOU?

Most of you have a graphics utility program of some kind (and if you haven't, you can either get DRAWEZEE or DRAGDRAW very cheaply), so how about drawing some cartoons for us? Nothing TOO near the mark of course, this is a family show!, but other than that the subject matter is up to you. If you send the result as a standard m/c file either on tape or disc that will be ideal, and you can have the satisfaction of not only seeing your work in print, but winning a small prize as well, as I will send all offerings on to Ray Smith for inclusion in his Dragonart Library competition. Paul.



USEFUL POKES FOR THE 32 HARVEY GREY

The following pokes and routines are designed to help you with your BASIC programs, enabling you to do things that you perhaps thought were impossible.

To start the ball rolling, here's one that just about everybody should know, but it's worth a mention anyway, the SPEED UP poke. POKE &HFFD7,0 will speed up the BASIC interpreter to almost double speed. POKE &HFFD6,0 will return the interpreter to normal speed. This should NOT be done when certain operations such as saving are being performed. It should be noted that the speed-up poke may cause some machines to crash.

Onto the next one, and how often do you find that you can't get a program to load right from the start? This is mainly caused by the cassette motor not starting up as soon as the computer sends the header signal. Therefore you have a perfectly saved program with no header. To load a headerless program, type in MOTORON : EXEC &HB714

To ensure that the header is always saved with the rest of the program you can do one of two things. The first is not to have the remote jack plugged in and have the cassette going before saving. The second, which I recommend is to use this short routine. MOTORON : SOUND 1,20 : CSAVE "program". This will set the cassette motor going and send a recording level signal before any of the program is saved. Using this routine I have never experienced an I/O error.

For some time, people have talked about a graphics mode that allows you to mix text and graphics together. This mode is known as mode 24 and the pokes given below allow you to call it up. FMODE 4,1 : SCREEN 1,0 : POKE &HFF22,5 : POKE &HFFC0,0 : POKE &HFFC3,0 : POKE &HFFC5,0

When writing certain programs, graphics may not be required. Therefore why have memory reserved for graphics pages which aren't going to be used? POKE 25,6 : NEW will clear the reserved pages and give you about 32K of memory to play around with.

How often have you wanted to have an input routine where the information is entered in lower case without the user pressing SHIFT + 0? POKE 329,0 gives lower case without pressing SHIFT + 0. POKE 329,255 returns you to upper case.

The following series of pokes enable you to disable the BREAK key. It should be noted however that the BREAK key is only disabled during the running of a program and it won't work on INPUT statements. POKE 411,288 : POKE 412,203 : POKE 413,4 : POKE 414,237 : POKE 415,228 : POKE 410,236 will disable the BREAK key and POKE 410,57 will enable it again.

Perhaps one of the first things that I wanted to do on my Dragon was to merge two programs together. But I was bitterly disappointed when I couldn't find such a facility in Dragon BASIC. The short routine below will allow you to merge programs together. CLOAD "programA" : POKE 25,PEEK(27) : POKE 26,PEEK(28)-2 : CLOAD "programB". You should then renumber program B so that it starts after program A. Then POKE 25,30 : POKE 26,1. After that you will find that you have two programs merged together.

Going back to protecting programs. If your program has no need for keyboard input then you can disable the whole keyboard by typing POKE 65301,0. To re-enable the keyboard, a line within the program should contain POKE 65301,20.

If you're like me and can only afford the cheapest of printers. You may find that when you dump basic programs out, you get continuous lines of code with no CR to separate each line. POKE 155,80 : POKE 154,64 : POKE 328,0 will force a CR between each line.

I mentioned earlier that when using the speed-up poke you should return to normal speed before saving. However, there will come a time when you forget and you won't realise it until you go to load the program in. The following routine should allow you to load in programs that have been saved fast.

AUDIOON : POKE 65497,0 : CLOAD "program". You will find that, on execution of this, the screen display will be lost and therefore you require the AUDIOON so that you can hear when the program has loaded. Once loaded, you should press the RESET button. You may find that there is garbage scattered throughout the program which will have to be deleted before running, but at least you'll have recovered most of it.

Saving machine code programs has always posed a bit of a problem. Especially as all the manual ever mentioned is that you need to know the start, end and transfer addresses. To find these addresses you should PEEK the following:

START => PEEK(487)*256+PEEK(488)

END => PEEK(126)*256+PEEK(127)-1

TRANSFER=> PEEK(157)*256+PEEK(158) then...

CSAVEM "program",START,END,TRANSFER

Following straight on from saving machine code, it is often handy to save graphics pages direct to tape -

CSAVEM"name",&H600,&HBFF,&H600 SAVES MODE 0

CSAVEM"name",&H600,&H11FF,&H600 SAVES MODE 1 & 2

CSAVEM"name",&H600,&H1DFF,&H600 SAVES MODE 3 & 4

Finally, here's a short routine that allows you to dump out to printer, everything that appears on the screen. POKE &H168,&H80 : POKE &H169,&H0F : POKE &H167,&H7E will start output. POKE &H167,&H39 will stop the output.

Software Reviews by R. J. Boston

Well after a couple of weeks of deciding whether to go for yet another mince pie or to fill up with another pint, the old faithful Dragon re-appears in my room ready to have its keyboard bombarded by my heavy hands. On the software front there is improvement in quality if not quantity. Many new(ish) games

were on display at the show. The most noticeable had to be the Indoor Football program by Quickbeam. Very good game this with the user being able to nominate the number of players, length of the game etc but it suffers from the one problem all Quickbeam games suffer from and that is the price tag. 8.95 is a bit steep for a game on the Dragon nowadays and if you can feel you can justify the price it's well worth adding to the collection. Other goodies on show was Pamcomms' Formula 1, a split screen racing game with an icon-driven menu (joystick!), quite honestly I think it beats Speed Racer hands down. Also there was Rolaball, a Marble Madness clone but very good nevertheless. Also there was Zotoka(shore!), another you are the ruler of an island type game without the luxury of any machine code(I lie, the autorun is a little bit of m/c). Appearing on the scene soon will be yet another adventure from Simon 'the solver' Hargrave. This one's titled The HEIR of TYROS. Well now I suppose I'd better get onto the review proper or I'll be risking the wrath of Paul

G. This one was kindly donated by Computape written by one Graham Smith(whoever he is??). Well I suppose it had to come, you've played Crazy Foota 1 now play Crazy Foota 2, written in the same vein as the original but with a few bits of finesse added to make it better. The game starts up with a hi-res screen of the old football boot having a hefty swipe at a ball with a nice little piece of introduction music to get you in the swing of things. The game has its own self-contained instructions on one page with another page to enable you to set up the game options (ie sound on/off). One annoying or rather predictable thing about so many Dragon games is green background on 99% of the hi-res games and this one is no different. The game format is roughly the same as the original except you can now have the greens v the reds. Control is by both joysticks(one for each player). The hardest feature to master is the movement of a particular player. This is done by moving an apparently mad manager up and down the side of the screen until he is level with the player you want to move and then press the joystick left or right to get the response required. A hearty cheer or cackle from the crowd signifies you've managed to get the ball into the opponent's goal(or your own if you are that way inclined) All in all it's not a bad little game. Obviously it will never rate as one of the classics but I'd like to see anyone who scoffs at the game to get their finger

out and write a better one. Well that about wraps it up from me this month, I think I've gone on far too long already except to say if Paul can devise a suitably fiendish competition I am willing to give away FREE(yes I did say free)copy of PAMCOMMS Formula 1. One last plea, if anyone out there does want to know where to get a game or hardware drop me a line I might be able to help you, and please let me know what you think of the reviews, good, bad or

indifferent and what else you'd like to see in them. Hopefully next month will be the long-awaited review of GAUNTLET but until then I'll sign off wishing you a posthumorous Merry Xmas and a Prosperous New Year-R.B..

SOFTWARE LIBRARIES - A PROGRAMMER'S VIEW

Having read Paul's article about software being given away on different formats, I thought I'd like to put forward MY views on software libraries. Recently, quite a few of these have appeared through other user groups. My view is that they should be stopped now! Although it seems like quite a good idea for a group to have a software library, especially in a library as small as ours, it can only damage the software industry. For a start, these software libraries are, on the whole, operating ILLEGALLY. Software cannot, under ANY circumstances, be put into a library without the written consent of the author/publisher. I just don't believe that the people who run libraries have written to EVERY author whose software is included.

As a programmer myself, I would NEVER allow my software to be put into a library. If anyone knows of a library that contains my software then drop me a line. You may think that I am just being selfish but there ARE valid reasons. For a start, I am paid on a royalty basis, 25p - \$2.00 per copy sold (depending on the publisher). If my programs are put into a library then I get paid for that ONE copy which has been bought for the library. It can then be hired out by lots of people who pay the person who runs the library a hiring fee. The person who runs the library is thus raking in cash on OTHER PEOPLE'S programs for him/herself. This is unfair to us programmers who have very little incentive to continue writing for the Dragon regardless of such libraries.

These libraries also encourage people to copy Dragon software. Well, when they can hire a game for a fraction of its retail price, why buy it? If the people who run libraries gave the programmers royalties out of the hiring fee then I might not object, but as it is, I DO object.

Another disturbing fact that has come to my attention is that of libraries SELLING illegal copies as well as hiring them out. Again, this is depriving us programmers, who put a great deal of work into the programs, of our hard-earned royalties. Due to this, and the libraries, we have lost quite a few VERY GOOD programmers to other machines. If you want us to continue programming the Dragon then respect our copyright: DON'T start software libraries, DON'T use software libraries and DON'T sell copies. If you've bothered to read this article you may be thinking that we programmers earn a fortune, and consequently ignore what I've said. If this is the case then YOU ARE VERY WRONG! In 1987, my earnings from the Dragon JUST got into 3 figures. I put a hell of a lot of work into the Dragon. I'm not complaining about the amount I get paid, money isn't my main aim, but if you rip off the programmers then they'll leave, and then YOU will be the ones who'll get hurt! Jonathan Cartwright, Starship Software.

STOP KNOCKING!!!!

Will you PLEASE stop making snide comments about Dragon User Magazine?. I get tired of hearing that it "doesn't have a colour cover", and "has too many long listings", and that "there's nothing interesting in it". If you need a colour cover page, buy Playboy or Beano, and if it has too many long listings and nothing that you find interesting, then blame yourself!. Like us, DU can only print what they have, and that means what YOU write for them. If by "nothing interesting" you mean that they aren't having goes at various firms, there's two reasons, [1] they can't afford the court costs, [2] they can't afford to offend prospective advertisers. Helen Armstrong is doing a damned good job, so why not help instead of moaning?!. Give it a try for a change!. Paul.



PASCAL FOR BEGINNERS (7)...GARY COXHEAD

Last time I left you with a program to give you some idea of how Pascal handles Input and Output. This should at least give you some ideas on how to format your output a little to make it look pretty. Pascal provides other features for edited output but as they differ widely from version to version, I will leave it to you to find out what your version can do. Shortly, we will be moving onto Arrays but before we do, we must finalise a few points on our loop structures. As I said earlier, Pascal provides 3 control structures to give repetition, WHILE, REPEAT and FOR statements. The following program shows how they are used. Note that the programmer is responsible for incrementing the loop control variable in the WHILE and REPEAT loops, whereas it is done automatically in the FOR loop.

```
PROGRAM loop (output);
VAR count : integer;
BEGIN
  writeln('FOR..DO LOOP');
  FOR count := 1 to 10 DO
    write(count:3);
  writeln;

  count := 1;
  writeln('WHILE LOOP ');
  WHILE count <= 10 DO
    BEGIN
      write(count:3);
      count := count + 1
    END;
  writeln;

  count := 1;
  writeln('REPEAT LOOP');
  REPEAT
    write(count:3);
    count := count + 1
  UNTIL count = 11;
  writeln;
END.
```

You can see that each structure has a specific syntax, which is summarised below:-

<while statement> = WHILE <boolean expression> DO <statement>.

A boolean expression is one which evaluates to TRUE or FALSE.

<repeat statement> = REPEAT <statement sequence> UNTIL <boolean expression>.

<for statement> = FOR <control variable> := <initial value> (TO:DOWNTO) <final value> DO <statement>.

Initial and final values are expressions, and the control variable must be of ORDINAL type (i.e. integer, char etc, but not real. There will be more about ORDINAL values in the next part)

Here are some examples to demonstrate the use of these control variables:-

```
FOR ch := 'A' TO 'Z' DO
  write(ch);
FOR x := 10 DOWNTO 1 DO
  BEGIN
    sum := sum + x;
    writeln(sum,x);
  END;
read(number);
WHILE number >= 0 DO
  BEGIN
```



```

sum := sum + number;
read(number);
END;

```

REPEAT

```

read(number);
sum := sum + number;

```

UNTIL number < 0;

Finally for this time, it is as well to compare the relative merits and features of the three control structures.

WHILE Test at top; may never execute the body of the loop. 'Body' is a single statement, possibly a compound one. Test condition first, 'body' second.

REPEAT Test at bottom, always executes body. 'Body' is a statement sequence i.e. no BEGIN and END needed. 'Body' first, test condition second.

FOR Not as general as WHILE and REPEAT, but useful for special purposes such processing arrays.

Relational operators which can be used are:-

< .. less than	<= .. less than or equal to
> .. greater than	>= .. greater than or equal to
= .. equal to	<> .. not equal to

Logical operators, AND, OR and NOT are used to combine Boolean expressions e.g.

REPEAT

```

readln(age);
readln(sex);

```

UNTIL (age=23) AND (sex='F');

The brackets are essential in the 'AND' expression because of the precedence given to various operators in Pascal:-

```

1 NOT
2 * / MOD DIV AND
3 + - OR
4 = < > <> >= <=

```

That's it for this time. Next time we'll take a look at arrays.

PRINTER POKES...Ken Grade.

Just in case the POKES given in Harvey Grey's article regarding carriage return/line feed do not work for your printer, here is the more usual method of overcoming the problem he mentions. Location 330(decimal) holds the number 1 by default (i.e. when the computer is switched on). This tells the Dragon how many bytes to look at when coming to the end of a (printer) line. If it is 1, it will look at location 331, which holds 13, the code for carriage return. If it is 2, it will look at 331 and 332, the latter holding 10, which is the code for linefeed. Hence, if your printer merely does a carriage return at the end of a line, without a linefeed, POKE 330,2. This will ensure the printer advances the paper up a line together with each carriage return.

Alternatively, consult your printer handbook, open up the printer and set the appropriate dip switch(es)!

Late News.....

Tim Hayton has just told me that as of now the Group's Micronet Gallery page number is 811220127. He also says to tell you that it may not be updated so regularly as usual because of the total lack of information from YOU, so perhaps you'd better write to him,, like NOW!.

Secondly, Graham Shith of Orange Software urgently wants new programs to market, so if you have anything suitable and want fame, fortune, etc, write to Graham, or better still send him a demo tape/disc.

EASY MACHINE CODE (17) . . . R.A.DAVIS

In part 16 the commands to initialise the printer, and stores to hold information were set up. As the dump is a large dump, the printer will have to print 4 dots for each pixel on screen. The elongation mode will take care of the horizontal dots, but the vertical dots must be set so that two are printed each time. This needs two scans for seven dots deep. Pixels 1 to 3 need 6 dots set, and pixel 4 has only one dot available from the seven on the print head. So pixel 4 must be scanned twice to get the second dot, and the 5, 6 & 7 can have two dots each. After the first scan, the scan moves down to start again with the fourth pixel. After that it starts a new scan of seven pixels from the 8th, and so on. If your print head has eight pixels deep, the program can be much shorter of course. Part 16 showed how to use a Branch to jump over the data to the start of the program, a device commonly used. The start is labelled @BEGIN.

140 @BEGIN LDU #@ESC which points the U register at the address of the data to set up the printer into graphics mode.

150 JSR @PRINT this is a sub routine placed at the end of the program, and it uses the ROM routine to send information to the printer.

160 LDU #@ELONG which points the U register at the printer Data needed for elongation mode.

170 JSR @PRINT to send those commands to the printer. The same routine will print the dump in due course

180 @START LDX #3072 which is the first byte on the graphics screen with DOS connected. If you are using a cassette based system this number is #1536 of course. The X register holds that address, not the data in that location, and is used as a pointer for the A register to get the data there.

190 PSHS X Using the S register as a stack, the address is saved for recall later in the program.

200 STX @SCREEN saving the address in space which was provided earlier for re-use within the scan routine.

210 LDY #9152 for DOS or 7616 for cassette users. This is a screen end address, which would normally be either 10751 (DOS) or 9215 (CASS), but as the final scan will be three pixels deep the screen end address must allow for this.

220 STY @SCREND which is the store provided for earlier, and it can be used for compare when needed.

230 LDA #80 or decimal 128. In binary this is 10000000 with only the right hand bit set. This can be used to test the byte on the graphics screen by loading the A register with that byte and using the BIT opcode for compare.

240 STA @BIT putting it into the store provided at line 80, where it can be modified and re-used.

250 LDB #32 In order to count across the screen, where each row consists of 32 bytes, the B register will be decremented by 1 every time a byte has been disposed of in the scan. When the B register records zero then the print head will need a C.R. and a new address is required in the X register to carry on with the next horizontal scan.

Pulser Software Releases: Lee Cooke.

The software featured here for review is a collection of 3 adventures and a Disc File Management Program for DragonDOS. To begin with the adventures, I first experimented with Starship destiny. After a title page for the company that wrote the game the title page of the game itself appeared on the screen.

The graphics of this page were quite impressive and a quite good character set was used, one I have seen previously called 'Data-Run'. The instructions were presented on a graphics 0 screen and were easy to follow and concise, then the adventure itself commenced. Each location has accompanying pictures which give an idea of the area in which the adventurer is, albeit a rudimentary one, but they take an amazingly long time to draw. An option to turn the pictures off would be nice, as I am sure it would make the adventure itself faster moving if you didn't have to watch the pictures appear each time.

I was unable to find one in the program itself. There was also some puzzling references in the descriptions; for example, I would be in a 'Cargo Bay Full Of Wooden Crates' yet when I LOOKed the program said I could see 'Not A Thing'?

The sneaky part of this adventure is the 'Real-Time' aspect as mentioned in the instructions. They really do sneak up on you in the sense that the scene change is surprisingly fast! As I was captured with no possessions getting out was an awkward prospect, but it was confounded more by the fact that if the keyboard was left alone while I was thinking then the machine proceeded to recapture me although I was already captured! All in all, this was a quite puzzling little adventure which had you very easily going round in circles.

There was one other gripe (purely a personal one). Starship Destiny (and Dungeon Destiny) require loading in 3 parts as detailed on the loading page.

Just follow the instructions, however, from a just switched on Dragon, and the game will load.

The other adventures are of a very similar format to the above for means of usage and expect commands in a similar way. The vocabulary appears to be fairly limited and the parser fairly unintelligent but a little thought will get your idea across. A quick note about the loader for 'Wildwest Destiny'.

This adventure loads in one part instead of three to the accompaniment of a very lively (possibly inappropriate) tune. The problems arise when you try to by-pass the tune and go onto the adventure itself. There is no option to go straight to the adventure, which would have been welcomed in my case, even if you do like the music!

Note: in all adventures, watch out for anything to happen to you!

The second product under review was 'Diskbase' which is a Disk Cataloging Program. This program is divided into discrete sections and comes on a protected disk. I have a single drive system and feel that this program, although it will run on a single drive system, was originally designed for a dual drive system for reasons I will give later.

The first problem I encountered with this system was the manual. Having a manual on disk is fine for games packages (such as the adventures reviewed above). When a utility is in use, however, especially with the level of use a product like this could get, a printed manual in my opinion is an essential.

All that was supplied in this case was a single sentence on a piece of printer paper saying:-

Type RUN'HELP' for instructions, otherwise RUN'MENU'

For a utility that will be used by newcomers to the dragon, as well as experienced users, that is just NOT sufficient. If an option saying 'Screen or Printer' was added to the help program this would be a more helpful solution but it would still not be adequate for people without printers

connected. As it is, the instructions themselves in the 'HELP' can be easily misconstrued. More examples would be a great asset. Anyway, on to the program itself. The first thing to do is to create a disk file to hold your database.

When this option is selected an instruction screen will be displayed. The instructions are very easy to follow for dual drive systems but do not give details on the usage with a single drive system. The program next asks you for

the overall category heading to be given to the database file. After entering this, this file will be opened on the blank storage disk in drive 2. Single drive users will need to insert the disk into drive 1 alternately with the disks to be catalogued. An important point to remember is to wait for the light to go out on the drive before swapping disks. After you have started your database, the next thing to do is to insert the disks to be catalogued, give them a reference number, then press enter. The directory of the disk will be read into memory and shown on the screen and stored in the database file. Once you have created your data file, you are now ready to do things with it.

The search is quite fast, and adequate for most people's disk libraries. A different sort option is given for very long records (>600) which have to be sorted in sections.

The fileread is also adequate, with options for 'all Basic' or 'all Binary' files to be displayed as well as specific searches on names or parts of names.

One point that caused some time-wasting was that the sort and fileread options all returned to the main menu after use, thus necessitating the reload of the modules to perform a second and subsequent searches. This was not really

necessary as the 'q' option to return to the main menu would have been just as convenient for use. One plus is the fact that the 'D' option allows directory listings of the disk in the drive in use at any time thus avoiding any name or 'file not found' problems.

All in all a quite good package, VERY impressive @ only \$2.99 for a disk (DragonDOS) with a backup copy on the reverse.

The prices of the adventures are as follows:-

Individual adventures: \$3.99 on Tape or DragonDOS

Compendium of all 3 adventures: \$8.99 on Tape or DragonDOS. All prices include p&p.

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The Late, Late Bit.....

Sometimes I wonder why I keep running this Group, it's about the most depressing occupation I know!. Why?, several reasons, ranging from personal ones like the fact that it stops me doing other more interesting things, to the attitudes of some of our members.

This is a big group, but a good 80% of the membership might as well not exist for all the interest they show. Honestly, I think a medium could do a better job of getting a response than I do, at least a medium is used to trying to get in touch with the dead!.

The whole idea of a Group is that EVERYONE should contribute something, (and I don't mean money, that's only to cover operating expenses,) but with the exception of about a dozen people the attitude appears to be one of almost total apathy, except when something goes wrong.

I suppose I ought to have expected it from the begining, all those letters saying "... what will I get out of joining the Group?" were a fair warning, but I was daft enough to imagine that sooner or later they'd want to put something IN to the group as well. Just goes to prove how wrong I can be, doesn't it?.

Every month we try to put together a reasonable newsletter, and every month we have the same old problem, lack of material. With the number of members we have it just shouldn't happen, we should be getting enough to be able plan Update for months in advance, even if each member only wrote one article per year, but it doesn't work that way, does it?, it's always the same old story of "let some other silly prat do all the work".

Well, believe it or not, some of us may be silly, but we're getting VERY tired of the rest taking advantage of the fact, so tired that it's more than likely that we'll decide to give you exactly what you give us, NOTHING.

For months now Update has had to rely on the efforts of the same few people, but that is going to stop. It's time the "regulars" got a chance to read someone else's efforts for a change, so if you want something interesting to read in future Updates I'd suggest that you make a start on writing it. If you just want to send off your subscription cheque and sit back while someone else does all the work, you've been sending your cheque to the wrong address, this is a USER GROUP, not a magazine. OK?

Is it REALLY such a difficult concept to understand?, that YOU are the "staff", that there IS no team of writers, experts, etc, just YOU, and that if YOU don't do the work it wont get done?. This may be a big group numerically, but from where I'm sitting you'd never believe it!.

Well, that's about all there is to say on the subject, you either act on it, in which case Update improves rapidly, or you don't, in which case it sinks slowly in the West. The choice is entirely yours.

On the subject of depressing things, I've been trying to think of something which isn't currently illegal, immoral, dangerous, bad for your health, or taxed, or in some cases all five. So far I haven't managed to come up with an answer ... can you do any better?. Proves how gullible people have become, doesn't it?. If all these dangerous, unhealthy, immoral things were REALLY so terrible, the current generation wouldn't exist ... their grand-parents would have died long before they were old enough to produce children at all. Ever wondered how it is that Our Glorious Leaders are always immune to the bad effects of anything?. Strange, isn't it?!. A bit like the Magistrates and Judges who spend weeks reading pornographic books and watching smutty films (all in the interest of justice, of course!) and then pronounce the material "likely to corrupt and deprave" yet somehow THEY never become corrupted etc curious, no?.

Anyway, I'm feeling deprived, if not depraved I need a drink (yes, I KNOW it's bad for the health, dangerous, and highly taxed), so any further comments will have to wait until another time.

Paul G.

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Redundant Information repeats!.

Now I know that the following will be both ancient and trivial to most of you, but I still get a lot of queries from people who haven't yet managed to work out how to save machine code programs. In a lot of cases they try to save them like Basic, and of course end up in a mess, so to save them more worry, and to save me a lot of letter answering, I'm reprinting the PEEKs required to find the correct addresses.

If trying to resave a m/c program originally loaded in from tape, then use the following:-

PRINT PEEK(487)*256+PEEK(488)

PRINT PEEK(126)*256+PEEK(127)

PRINT PEEK(157)*256+PEEK(158)

This will give you the correct addresses to resave to.

If you're trying to resave a program originally loaded in from a Dragon DOS disc, then use:-

PRINT PEEK(1618)*256+PEEK(1619)

PRINT PEEK(1620)*256+PEEK(1621)+answer to first line

PRINT PEEK(1622)*256+PEEK(1623)

Simple, isn't it? So now you don't need to write and ask me!.

By the way, for those disc owners who occasionally get a program which kicks the drive into life and wont let it stop, POKE 55352,0 will take care of the problem.

FORTH OPERATING SYSTEM: Simply the best there is. Written by John Payne, and available for DragonDOS, Superdos, and 88 or 89 DeltaDOS. Available ONLY through the Group. 8.50 inclusive. Orders/cheques to the Group, 6, Navarino Road, Worthing, Sussex.

Circuit Sheets: Available for B32 (most variants), B64, Dragon DOS controller, and Canana DOS controller. All the same price 1.00 each. Cheque/orders to the Group, 6, Navarino Road, Worthing, Sussex.

Dragon Upgrade manual: 32/64 conversion method fully explained so that you can uprate your 32 yourself without difficulty. Written by Bob Hall and available only through the Group. Price 2.00. Cheque/order to the Group, 6, Navarino Road, Worthing, Sussex.

Delta DOS utility: A m/c utility to copy all BASIC and m/c files from disc to tape in one operation. BASIC listing of loader and Hex dump 1.00 or on cassette for 2.50. J.C. Russell, 33, Tennyson Avenue, Clevedon, Avon BS21-7UJ. (0272-875528).

Basic Programs Listed. 1 Program Listing...75p. up to 4 pages. Additional pages 5p. each.

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G.W. Hale, 'Rose Cottage, Hungerhill, Coolham, NR.Horsham, U.Sussex. RH13 8BE.

Games to disc transfer...Unprotected game code of any game sent in return for a blank tape and 22p stamp, but you MUST include the inlay card to prove you have bought the original. Contact N.R.Vine, 120, Auriel Avenue, Bagenham, Essex RM10-8BU.

Has anyone got the two 069 accounts packages sold by Compusense about a year ago? Phone Chris on 091-416-5415.

Scrap Dragons and CoCo's wanted for spares. MUST BE CHEAP!. Phone Alan Butler on 0371-4234 (evenings only please.).

Three Casio electronic printing calculators for sale, one with built in calendar. 14.00 each. Two racks with baskets (office type) 8.00 per set. One wire catchframe for printer paper. 6.00. Phone Graham Strong, Worthing 48575.

New Program!. Gives facts on the countries of the world. Areas, Capitals, Populations, Currencies and Languages. includes analysis facility and map showing the position of the country required. Available on V1.0 disc or tape at 4.00 inclusive. Also available is a very comprehensive Home Accounts program (disc only) at the same price. Write to Graham Strong, 78, Coleridge Crescent, Worthing, U.Sussex BN12-6LT.

WANTED FOR SPARES! Any dead printers or DOS cartridges ... needed as spares for YOUR repair jobs, so MUST be cheap!! Phone Paul Grade on Worthing 207505.

STOP PRESS

IMPORTANT - Owing to illness, Paul will be unable to answer ANY mail/phone calls for 5/6 weeks. 18/2/88 *Ken Grade*. (Ken Grade.)

Classified and Special Offers Ads.

DRAGON MUSIC! These selections of music on either disc or tape are arranged and produced by Dave Cadman. This month's new selection is "MARCHES". Tunes are divided into categories, Classics, Rags, Standards, Miscellaneous, etc, and each tape or disc contains a selection of several tunes. Prices are 3.50 per tape or 4.00 per (DragonBOS) disc, inclusive of postage.
Orders to: Dave Cadman, 32, Breendon Hill Road, Derby. DE3-6TG.

WANTED! Delta controller cartridge, either a defunct but repairable or in working order will do, but **MUST** be cheap!
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Dragon 64 with "Plus" board 120.00; Dragon Data BOS cartridge 550.00; 2 x 80 track double sided drives 150.00; Greenscreen monitor 30.00; Full set of OS9 and FLEX plus manuals, offers.
Alec Cox, Leeds B60887 after 6 pm.

Back issue Dragon User Magazines. All issues from number one to the last "pre-subscription" issue, plus Oct. and Nov. 86. plus many Dragon books. Prefer to sell as one lot, but write or phone for details.
Neil Scrimgeour, 125, Occupation Road, Corby, Northants. (0536-66590).

WANTED! Manual for photocopy for Electronic Author. FOR SALE. Most back issues of Dragon User magazine. 15p per copy plus postage, would prefer to sell in one lot.
K. Fry, "Lotus", Shaw Lane, Shaw, Swindon, Wilts. SMS-9PJ.

Dragon 32 30.00; Delta BOS controller 20.00; Cumana 40 track single sided disc drive 50.00; Nannesmann MT80 printer 100.00; Dragon books including Inside the Dragon 5.00; Quickshot joystick 10.00; 2 x analogue sticks 5.00; 20 5.25" discs 10.00; back issues of Dragon User 50p each inc.
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Barry Johnson, 187, London Road, St. Leonards-on-Sea, Sussex. (0424-714048).

ATTENTION ALL SCANDINAVIAN DRAGON OWNERS! Ola Eldoy would like to hear from you and send you a sample copy of his Dragon Computerclub newsletter. You can contact Ola at STOKKEN, N-5410, SAGVAG, NORWAY. Geir Hovland would like to hear from you too. His address is LEGDAVEGEN, 6943 NAUSTDAL, NORWAY. (And if anyone in the UK would like to write to either Geir or Ola, letters will be very welcome ... and don't worry, their English is VERY good.)

New Programs from the Group!
Two new programs which are an absolute essential for those who own both Tandy and Dragon computers!. C2BML will convert any m/c Tandy CoCo formatted sics to Dragon Bos (V1.0) format, and C2BBAS will do the same for any CoCo formatted disc containing Basic programs, so now you CAN buy CoCo disc programs and run them on your Dragon!. The programs were written for the Group by Randy Longshore, and are available on disc at 3.00 each or both on one disc for 5.00.
Orders to Paul Grade, cheques made payable to the Group, please.

They don't write 'em like that any more!!!. Two music selections on disc from R.A. Davis, Victorian Songbook, and Comic Songbook. Words displayed on screen while your Dragon plays the music!. Only 1.00 each if you send a Dragon BOS formatted disc for each selection required, and a suitable stamped addressed envelope for their return. ALL proceeds are very generously being donated to Group funds, so how can you lose?
Discs and orders to R.A. Davis, 39, Boxley Drive, West Bridgford, Nottingham. NG2-760

WANTED! Manuals for OS9 Stylograph, "c", and Dynacalc. Please send details/price to Randy Longshore, 15547 Chequer Drive, Chesterfield, Mo. 83017, U.S.A.

PRINTOUT SERVICE.

1 BASIC program listing (up to 5 pages). 50 pence.
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All tapes or SuperBOS compatible discs (ONLY) must be accompanied by suitable stamped addressed envelope to hold tape/disc and printouts. All enquiries must include SAE. 24 hour return service where possible. Contact Z. Green, Aberllywd, Insh, Kingussie, Inverness-shire. PH21-INT.

GRAPHICS SCREENS... The Group Graphics Library, "DRAGONART" has a good selection of screens available now, so why not make use of the service offered? Why not submit YOUR graphics as well?, you could win a prize!. All you need do is write for details.
Dragonart Library, 5, Glen Rd, Parkstone, Poole, Dorset.

NEWCOPY: A m/c tape utility program for the production of backup copies of m/c programs. Capable of loading either headed or headerless programs or sections of programs, and saving these in their original or alternative formats. Also allows easy tape positioning using motor on/off routines. Written by Stuart Mills, and available to Group members at 2.50 plus 25p postage/packing.
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A NEW ADDITION TO NDUG FORTH. John Payne has now written a FORTH ASSEMBLER to run with the FORTH OS package. At the moment this is only available in V1.0 BOS, but other variants may be obtainable at a later date. If you already have a V1.0 version of our FORTH OS we can upgrade it to include the assembler package for just 3.00 simply return your ORIGINAL disc and a cheque for this amount. (Copies can NOT be accepted under ANY circumstances). If you do not yet have our FORTH OS, you can purchase the upgraded version for 12.50 inclusive. It includes all the original features, of course.
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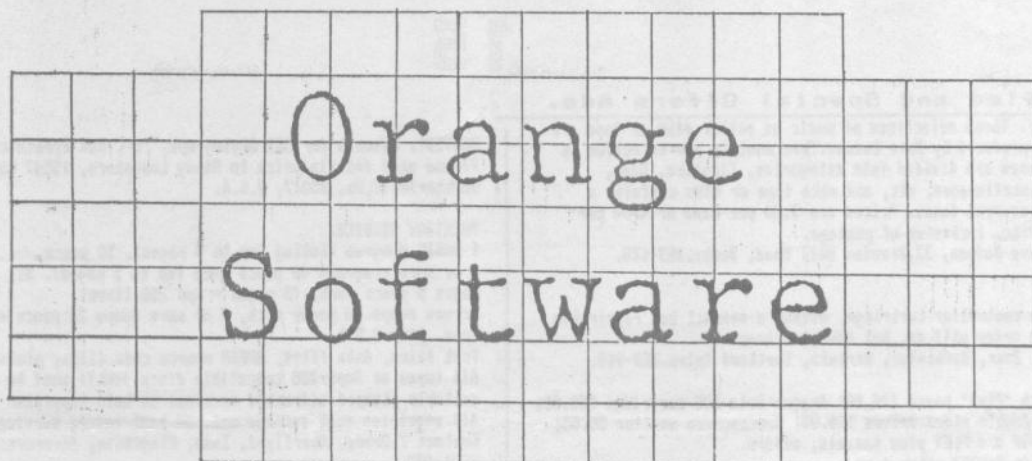
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Jason Shouler, 70, VV Victoria Road, Parkstone, Poole, Dorset. BH12-3AE. 0202-722599.

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