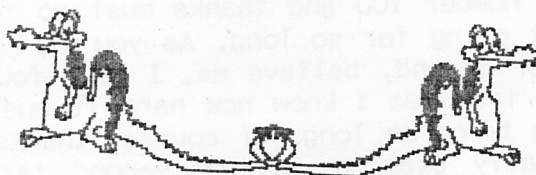


The Newsletter of the National Dragon User's Group

DRAGON



UPDATE

CHAIRMAN: Paul Grade. 6, Navarino Road, Worthing, Sussex. Phone: 01903-207585
EDITOR: Stephen Wood. 52, Downsway, Springfield, Chelmsford, Essex. CM1-5TU.
S/WARE EDITOR: Mike Stott. 10, Mellor Close, Prescott, Merseyside. 0151-480-7712

ISSUE 100

"THREE FIGURES AT LAST!!!"

APRIL 1995

THE GAFFER'S BIT

A Hundred Years Of Update! ... OK, so maybe it was just a hundred issues, but it FEELS like years!. Wonder if this will get me a mention in the next Honours List? ... I'd like the chance to explain in the greatest anatomical detail exactly where they could fit their OBE or whatever!. Anyway, enough of this garbage (more than enough, I agree!). I've had a VERY serious complaint from Mike Stott, who thinks that there should be more Dragon software written for him to review, which seems to me quite a reasonable point after all, how can he write reviews about all the interesting new Dragon releases if there haven't been any?!. Now by a strange coincidence a lot of our Group members are supposed to be professional software geniuses (or whatever the plural of genius may be), and they also claim to own Dragons, a combination which OUGHT to result in a stream of new releases of top class Dragon software. No?. Why not?!. Trying to program within 32K again ought to be a very valuable exercise for ANYONE who has had to spend the past few years trying to write the kind of garbage sold to gullible PC users (you know the sort of thing, 10 Meg of Turbo+++ to do the equivalent of a FOR/NEXT loop), so why not see if you CAN still program? it could be a worthwhile experiment, interesting, educational, perhaps even useful and there are still quite a few Dragon users out there who would like to buy the results. *Paul Grade.*

Celebrations all round...

By some amazing miracle, yes, our beloved Dragon Update reaches its centennial, its 100th edition. Quite how this has been achieved amid a sea of declining numbers, declining Dragons in captivity, declining articles for submission is something that will forever remain a mystery, and for all the hard work that everybody has put in, we don't even get a telegram from the Queen.

Speaking of which, our sorely missed rival publication 6809 User (formerly Drag Mag formerly Big Boys In Boots) did a profile of NDUG when we reached our last milestone, namely our 50th issue in 1988. In an interview with the legendary Simon Jones, our revered Chairman Grade was quizzed about whether Update would still be around in 50 issues' time to celebrate its 100th edition. HRH The Chairman's response to this was "Not bloody likely". It is sad indeed to report that this incident is the only time that I have ever known Paul to be wide of the mark by a considerable margin, and I think it is to everybody's eternal shame that we did not do more to help him make that prediction come true. On the other hand, though, Simon Jones did finish off the article with the thought that the loyal supporters of Update would ensure its future for ages to come. A world where Simon Jones is right and Paul Grade wrong? No, it doesn't bear thinking about... So I quizzed our honourable Chairman about the chances of Update being around for its 150th edition in 2003. In response, he said "Wanna buy a user group?"

Happy Christmas/Easter/Update Centennial. Stephen.

PEEKING THE DRAGON(56) . MIKE STOTT

This issue of UPDATE is number 100 and thanks must go to Paul for starting the group and for keeping it going for so long. As you will see from the heading to my article this is number 56 and, believe me, I have found it very difficult to provide a page for each issue so I know how hard it must have been for Paul to keep it going for nearly twice as long. Of course, thanks must also be passed on to the Editors (especially Stephen in his second term of office) who have collected all the articles over the years and helped us to have a very informative publication. Thanks also to those people who have shared their knowledge with us over the years by writing articles. These articles are needed more than ever now as our numbers decrease so put pen to paper now and let the rest of us know what we could do with our Dragons if only we had that little bit of extra know-how. Thanks to Mike Townsend for his article on the Huyton Show.

This was the first show I have ever put on and it now looks as though I will go down in history as the person who organised the last Dragon Show, not something I would like to be known for. Yes Mike, I know you enjoyed it, and I think everybody else who was there had a good day out but, unfortunately, it would take the promise of at least 100 people attending to persuade the other traders to attend and there is no way that this could be promised. If it could I would be more than willing myself to arrange another show in this area. I have been asked by a number of our members why there has been no review of LOTTERY NUMBER GENERATOR (available from NDUG for only 2.00). A number of review copies have been sent out, mainly to members in Blackburn, but the only response we have had from these have been postcards from The Bahamas and other exotic locations together with generous donations to the group. It would appear that the program is too good and anybody using it is assured of winning the first prize in the National Lottery when they use the program. You can believe me or believe me not but 2.00 is surely a small price to pay to discover how good it really is, and how many million have you won without using this program?. If you should receive this issue on the first of the month I am sure that you would consider it a pure coincidence. I have received a rather lengthy letter from John Rogers of Richmond in Surrey which is for SOFTWARE SEARCH but will have to be mentioned in my article as it is too long for SOFTWARE SEARCH. John is an 'analogue' engineer who has managed to bone up on digital electronics but is struggling with the software side of things. There are two areas in which he needs help. Firstly he wants to measure the performance of rechargeable NICAD cells under discharge load condition and keep a record of the same. This would enable him to sort out the dud cells from the good ones. Secondly he wants to measure and store both inside and outside ambient temperatures. He needs to keep a record on disk in both instances and also the ability to print out the results. All the hardware side has been assembled so it is just the software side that needs to be sorted out for him. Preferably he would like a reading to be taken every minute and this data saved to disk. Then he would like to be able to view the results either on screen, or preferably in the form of a printout using a graph (not the Barchart type but the type where a series of dots are joined by lines). He uses a B&W monitor and owns two Brother HR5 printers (one serial and one parallel). Back in 1984 he wrote a program for a BBC which could possibly be of use but has since lost the listing and the tape, and has now forgotten how he did it. In his letter John refers to a Dragon owner who runs a Geographic Station and published articles on his work, but transferred the information to other machines in serial form. The chap you refer to is, I think, Keith Garwell from the Newchapel Observatory and Natural Sciences Centre, Newchapel, Stoke on Trent who was at the Ossett Show in 1992. I do not know whether Keith was persuaded to join the group or not so I do not know whether he will be reading this article. One person who might be able to help is Richard Sutcliffe who is into electronics himself so will appreciate more than anybody the problems facing you. I have sent him a copy of your letter and, hopefully, he will be able to help you. If any of our members read this and think that they can be of some help, however little, please contact me and I can either send you a copy of the letter or put you in touch with John.

Mine Hunt...Paul Burgin

This is a conversion of the MS-Windows game Minesweeper. A simple but challenging game which will probably already be familiar to many NDUG members. It is a BASIC version without hi-res graphics, sound, or fancy input boxes, but is nevertheless a full implementation of the game in less than 2K of code!

The aim of the game is to locate all of the mines randomly hidden around the screen, and press SPACE on a hidden square to search that square for nearby mines. If the square is safe, then the number of adjacent mines will be displayed in the square. Or if there are no mines at all then the enclosing area is cleared. You must then use the information to deduce the exact location of the mines, and mark them by pressing a letter key with the cursor over each of the squares that you think contain mines. The top right screen corner shows the number of mines remaining. You can also press SPACE on a square which is already marked or unveiled to search around that square. All hidden squares around the cursor are then searched. But beware! If you try to search on a square which hides a mine, then the mine explodes and the game is over!. Alter the variables XMAX, YMAX, and MINES in line 10 to configure the game difficulty. Recommendations are 8x8 with 10 mines for beginner, 16x16 and 40 for intermediate (the default setting) or 30x16 with 99 mines for expert - this is maximum. Mine Hunt will automatically detect and use the mouse if run on the PC-Dragon emulator. If you don't wish to use this facility then you can save some typing by missing out lines 20 to 40 and 330 onwards. Have fun!.

```

10 XMAX=16:YMAX=16:MINES=40:BACK=214:MARK=109:UP$=CHR$(94)
20 EO=&HFFE0:E1=EO+1:EF=EO+15:POKEEF-1,80:POKEEF,67:POKEE1,0
30 M=PEEK(EF):IF PEEK(E1+1)=80 THEN MOUSE=1 :ELSE 50
40 POKEE1,10:POKEE0,128:M=PEEK(EF):M=PEEK(E0):IF M THEN POKEE0,0:M=PEEK(EF)
50 DIM F(XMAX+1,YMAX+1),R(XMAX+1,YMAX+1),XSTACK(XMAX*YMAX),YSTACK(XMAX*YMAX)
60 X0=(30-XMAX)/2:Y0=(16-YMAX)/2:PRINT"PLEASE WAIT...":FOR I=1 TO MINES
70 X=RND(XMAX):Y=RND(YMAX):IF F(X,Y) THEN 70 :ELSE F(X,Y)=1
80 NEXT:CLS4:A=BACK:FOR X=1 TO XMAX:FOR Y=1 TO YMAX:GOSUB190:NEXTY,X
90 GOSUB230:IF SEARCH THEN 130 :ELSE ON (R(X,Y)+1) GOTO 100,90,110
100 R(X,Y)=2:A=MARK:GOSUB190:LE=LE+1:IF F(X,Y) THEN F0=F0+1:GOTO 120 :ELSE 120
110 R(X,Y)=0:A=BACK:GOSUB190:LE=LE-1:IF F(X,Y) THEN F0=F0-1
120 IF (MINES=FOUND) AND (MINES-LEFT=0) THEN PRINT@480,"YOU WIN!":END :ELSE 90
130 IF R(X,Y) THEN 160 :ELSE XT=X:YT=Y:GOSUB220
140 A=F(X-1,Y-1)+F(X,Y-1)+F(X+1,Y-1)+F(X-1,Y)+F(X+1,Y)+F(X-1,Y+1)+F(X,Y+1)
150 A=A+F(X+1,Y+1)+48:IF A>48 THEN GOSUB 190:GOTO 180 :ELSE A=32:GOSUB190
160 XT=X-1:YT=Y-1:GOSUB 200:XT=X:GOSUB 200:XT=X+1:GOSUB200:YT=Y:GOSUB 200
170 YT=Y+1:GOSUB 200:XT=X:GOSUB 200:XT=X-1:GOSUB 200:YT=Y:GOSUB200
180 IF SK<1 THEN 90 :ELSE SK=SK-1:X=XSTACK(SK):Y=YSTACK(SK):GOTO140
190 PRINT@((Y+Y0-1)*32)+X+X0-1,CHR$(A);:RETURN
200 IF R(XT,YT) OR (XT<1) OR (YT<1) OR (XT>XMAX) OR (YT>YMAX) THEN RETURN
210 XSTACK(SK)=XT:YSTACK(SK)=YT:SK=SK+1
220 R(XT,YT)=1:IF F(XT,YT) THEN PRINT@480,"YOU LOSE!":END :ELSE RETURN
230 PRINT@30,RIGHT$(STR$(MINES-LEFT),2);:IF MOUSE THEN GOSUB 360:POKEE1,8:GOTO330
240 J=5+(CY<8):K=CX+((CY*32)AND 255):R=J*256+K:P=PEEK(R):POKE136,J:POKE137,K
250 EXEC32777:A$=INKEY$:IF A$="" THEN 250
260 POKER,P:POKE143,1:IF A$=UP$ THEN 290 :ELSE ON (ASC(A$)-7) GOTO 300,310,320
270 SEARCH=(A$=" "):X=1+CX-X0:Y=1+CY-Y0
280 IF (X<1) OR (X>XMAX) OR (Y<1) OR (Y>YMAX) THEN 250 :ELSE RETURN
290 CY=(CY-1)AND 15:GOTO 240
300 CX=(CX-1)AND 31:GOTO 240
310 CX=(CX+1)AND 31:GOTO 240
320 CY=(CY+1)AND 31:GOTO 240
330 B=PEEK(EF):B=PEEK(E0):IF (B AND 3)=0 THEN 330
340 X=1+PEEK(E0+3)-X0:Y=1+PEEK(E0+5)-Y0:SEARCH=B AND 1
350 IF PEEK(E0+2) OR (X>XMAX) OR PEEK(E0+4) OR (Y>YMAX) THEN 330
360 POKEE0,1-M:POKEE1,10:M=PEEK(EF):M=1-PEEK(E0):RETURN

```

Information Superhighway. C. Scott

There has been a lot of media hype recently about the Information Superhighway and how it will revolutionise our lives. Apparently, all the accumulated knowledge of the world will be available at our fingertips, we will be able to do our shopping and banking without leaving the comfort of our home, and we can communicate with anyone in the world from our keyboards. Sound familiar? A number of years ago, when cheap modems became generally available, bulletin boards started springing up. Services like Prestel and Telecom were being promoted, and we were being told the same things. It didn't change our lives then, and I don't suppose it will now. Whatever happened to the promise of a paperless office? Computers were supposed to cut out the need for producing paper originals because all communications would be digital and all information would be stored on computers. In reality, computers generate more paper than any manual system ever did, and microfilming is being used to reduce the vast filing problems. Telecom Gold was promoted as the communication medium of the future. Everybody would communicate by electronic mail. However, its use is largely limited to the computer industry, colleges and universities with their huge interlinked systems, hobbyists, and certain professionals like journalists, whilst most people continue to use the telephone and the Royal Mail. They like to either speak directly or communicate in writing, hence the popularity of the fax machine. Computer communications are still seen by many as highly complicated and expensive to use, and best left to "boffins". Home banking has never taken off because most people use the bank to obtain or pay in money, and this cannot be done over telephone lines. Home shopping has also been a flop; France has had it with their Minitel system for at least 10 years and it has not been successful. Most people like to see what they are buying and would not be happy with ordering blind over the phone, especially foodstuffs. Some people actually like walking around shops!. The average person is not remotely interested in accessing vast offline databases; the average house doesn't even possess an encyclopaedia. It is, of course, a roaring success in academic circles, with more and more universities logging on to Internet, a huge offline database and e-mail system based in the USA. Apparently, you will be able to see the news bulletins before they are broadcast. So what? With 24 hour TV and radio, where's the need?

I wouldn't want to give the impression that I am opposed to modern technological advances. I am not, if it improves the quality of our lives, but I am against media hype which gives the impression that the world will change overnight. The journalists only speak to the computer whizzkids who are keen to promote their new creation and convince them that the public will share their enthusiasm. I wouldn't trade in your Dragon yet, because although some changes will come, it won't be tomorrow, or next year, but eventually.

Co-Co-A-Go-Go... Paul Marlow

Last year I became the proud owner of a CoCo 3. It came with a lot of OS9 level II software but nothing that really showed off the machine's graphics. As CoCo 3 software is virtually non-existent in this country, I had to go elsewhere, which means the USA. Did you know that the Radio Shack consumer mail centre (CMC) has virtually every piece of Tandy software made for any model of CoCo? The prices are fairly reasonable, by Tandy's standards anyway. All you have to do is give the Radio Shack mail order store a call with the catalogue number of the item you want and have your credit card ready (they only accept payment this way). It takes about a month for your order to arrive, depending on how quickly the mail order store can get the software from the CMC and how long HM Customs take to check the contents of the package, although Radio Shack don't debit your account until they post the order.

The Radio Shack mail order store can be reached on 0101 817 624 1196. Texas is six hours behind GMT, so remember to ring after 3pm our time. They generally use airmail, and remember that import duty and VAT has to be paid when the post office delivers the parcel.

My Favourite Utilities...D. Cadman

Over the years many utility programs have been written that cover the same subject, or cover a host of subjects from a menu, but eventually you find yourself using a particular one for a specific purpose. I propose writing a series of articles on such programs; you may agree or disagree with my selection, or you may think I've missed a good one out, perhaps I've not got it! Let Paul or Stephen know, and you never know, the Group may publish a reasonably priced disc of Our Favourite Utilities. The reason for picking one out above the rest could be due to several factors. I like a utility to do one thing only and do it well, so I pick a program to suit the need. I also dislike beeps to tell me I've selected a certain option - I KNOW that, it was me who selected it in the first place! Also, "busy" display screens with flashing borders etc - wasting time and memory. This is all very well in games, but not utilities, although there has to be exceptions as you will see.

I admit to liking nicely positioned and spaced text, as R.A.D. would verify, but I can overlook it up to a point, or reprogram it! Paul has asked me to point out that I normally use DOS version E6, as he points out, quote "some of the 'stock' utilities can give peculiar results if used with the wrong DOS type". You have been warned!!!

Number One : DISCDET by Pam D'Arcy.

This appeared on Up-2-Date number 12, and is a result of blending together of DISKDET from Dragon User August 1985, and DISKFIX, a repair program on Pam's DISK-KIT disc, and was put together with a few modifications by Dave Riley. Full details were given in Up-2-Date, but for the benefit of those who do not subscribe (and you are missing a lot) I will give a brief outline.

As well as a read/writing to 5.25 inch discs, it will also work with 3.5 inch. A sector with a CC error will produce a message on the screen to this effect but will allow you to still view and print out the sector, thus allowing you to examine it with a view to correcting the error. A word here on this; if the error occurs within a text area of the disc, then you stand a chance of spotting the error, but if it occurs in any function, array, or any similar part of a program, it is far more difficult to correct. But at least this program will give you a print out of the offending sector and narrow it down to 256 possibilities!

Although there is a menu at the bottom of the screen there are no instructions within the program, but it is fairly straight forward, and full instructions are available on the Up-2-Date disc, available from Ray Smith or Nev Simmons.

You may ask, "having got a disc problem, how do I know where to look to be able to use this program in the first place. 40 tracks of 18 sectors is a large search area." Stay Tuned.

SOFTWARE SEARCH(5). MIKE STOTT

This item is not really software but I am sure somebody out there has got an I/O PORT from Maplins for sale. I sold one at the Blacklow show and Dave Hodge, Aspinall House Farm, Appley Bridge, Nr Skelmersdale, Lancs., WN8 0SX just missed out on buying it and wishes to purchase one. Please contact him if you have one for sale or just lying there in your attic gathering dust like mine was.

I am willing to put similar items in future articles so there is no need to restrict your wants to software. Just write and tell me what you are looking for. As long as it is Dragon related it is eligible as far as I am concerned.

Dragons In Ham Radio[1]-J. Brown

Reading issue 99 Of Update, I noticed two mentions of amateur radio, and I was wondering how many amateurs we have in NDUG. I have been a ham for many years, building all the equipment for RTTY, SSTV, Packet, Amtor, and many others. I was given a box of goodies by another ham, amongst which were some printed circuit boards. They looked interesting, and eventually became a Dragon computer. It got rebuilt, a power supply made up, and whoopee!, we were into computers. On joining NDUG, I discovered there were other hams using the dear old Dragon, so interest grew. There was only one firm producing relevant programs for the Dragon, and I have seen most of these. They appeared in many forms, complete with the VERY necessary paperwork. There were CW tutors (very fine), and one can even use the program for Iambic keying, set speeds, words, letters, figures, etc, and they appear on screen as well as on the speaker. There was a CW Rx/Tx program, again most useful, RTTY Tx/Rx again, then Packet (to the AX25 system), and so on to Amtor. Along the way there was also an RX only SSTV program (for the 8 sec. standard). Some of these programs need a great many instruction sheets, and I must emphasise that these are absolutely essential! The originator of these programs, G4BMK, has now gone exclusively into PC software, so these may now die out as far as the Dragon is concerned. There were also a few programs for the Tandy CoCo from the States, but I have only seen a couple of these, which I think were even converted from elsewhere. Almost all the programs mentioned were originally made up as "one off", as when run they give both menu and originator data, and of you are a licensed amateur it can also give your call sign as well. You can also send your call sign in CW, as the program reads the call sign or your name. Each program was individually produced. I have seen many of them, and they all appear easy to use and very effective, if you follow the instructions carefully!. Some programs needed external interfaces. RRTTY needs a terminal unit (modem) which is fed to the printer port; this allows signals from the speaker side of the receiver to be converted into on/off signals (5v or .6v) known as HIGH and LOW inputs. These switch the computer via the in/out chip which, in turn via the software, converts them into video readable signals. Other, like CW, need a simple little unit to do the same thing. Packet needs a separate interface for AX25 use. It allows Packet signals to be read, including the ARQ/FEC, and also allows transmitting, with the transmitter being controlled by the Dragon keyboard. There were PCBs commercially available for most of the interfaces at one time. With Amtor it is a different set up. A separate signal, called the CLOCK, is needed. This is a 1Kc signal that controls the whole operation of the Amtor system. The internal clock (crystal) of the computer is not accurate enough, as the Amtor is switched from Tx to Rx automatically by the other station. Your Tx controls the other station's receive, and vice versa. Provision is made in some programs for you to type in your reply while still watching the other station's transmission, and it can then be sent at a single key press. Using dedicated equipment gives you complete control, but when using computers thought has to be given before making a key press! There is also a program called WEFAX, which allows weather maps to be received. This needs only a good, stable receiver and an input from it into the computer. Listen on 3650 for the Spanish weather station, and you can watch the map on screen or print it out. I understand that one of our members is also working on a FAX program, so maybe that will appear soon...this is being tested on 2 meters, I think (73s Jim).

More next time.

**** Johnny Brown has sent us a short series of articles on the general topic of Amateur Radio, which we will be running in the following couple of issues, BUT there has been a lot of interest expressed in the subject, and it really is time that more of you Amateurs got around to writing something for us. CQ CQ CQ.*

Several Shorts-David Mitchell

To start with, here is a short routine which does the same as the routine in Ken Grade's Titling article - display output one character at a time. This one is in BASIC and was printed in Dragon User in September 1994:

```
100 A$="DRAGONS ARE GREAT!!!!"
110 FOR I=1 TO LEN(A$)
120 PRINT MID$(A$,I,1)
130 FOR D=1 TO 250:NEXT D
140 NEXT I
150 PRINT
```

That seems a bit simpler to me, and should work with graphic screen drivers.

And now, a short Star LC100 printer review. It is a reasonably priced printer of sturdy construction, though the cable connector seems just a little shaky. It comes with an excellent manual and PC cable (which also works with the ST). It has Epson and IBM emulations so works with almost all software. I haven't used the colour features very much but they seem to work well enough and are useful for highlighting text etc. One of its best features is the Electronic Dip Switching, which allows adjusting of the DIP switches using the control panel. This is much easier than manually setting them. There is a 2K buffer which can be used to download custom character sets. Output quality is good and the noise level is acceptable. So if you are after a 9 pin dot matrix for listings, essays, and letters, this one is well worth a look.

"The Dragon Notebook", published by the NDUG Dragonart Graphics Library, is possibly the best book for the Dragon. It is packed with routines, hints, pokes, ROM details etc. A great source for BASIC and machine code programmers. Want to know how to have three colours in PMODE4? It's in the Notebook. The best thing of all is that it costs a mere 3.00. Essential stuff.

We move on to adventures, a popular pastime for Dragon Users. If you are interested in writing your own games then the best thing to do is to read the Adventure Trail and Write:Adventure articles in back issues of Dragon User, which contain a wealth of ideas and tips. Playing adventures is also a good way to get ideas if you are stuck. The first adventure, Colossal Cave, is well known. What is little known is that it was based on a real cave in Kentucky. Crowther (co-author) worked for the Cave Research Foundation and mapped out Mammoth Cave which became part of the game. This led me to wonder if we could have text based Virtual Reality. (**Called, perhaps, Virtual Literacy? Yes, most schools have that these days...SW**) Has anyone put a real place into a program? Perhaps this could be useful for educational purposes. Dragon Detour features real places but is still a game. I was thinking of something more like a Microsoft Gallery, but not nearly so ambitious or expensive, where the user can visit, see the paintings, and find out information as they need it?

What to write, when to send

I know that you are all going to be desperate to put pen to paper or finger to keyboard to make sure that I have a huge stack of articles to see us into Update and NDUG's next century of glorious existence, and I'm sure that a million brilliant articles are poised, awaiting an envelope and a stamp, to find there way onto these hallowed pages. If this is the case, and I'm sure it is, then you may like to know that these days, what with the Post Office being what it is (ie useless), Paul, Mike, and I need to keep things ticking over in advance, and to this end the copy date for received material for consideration in Update is the TENTH (10th) day of the PRECEDING month, or in simpler terms, May 10th for the June issue, July 10th for the August issue, and so on. This gives me time to assemble the master disc and send it to Paul and enable him to get it ready before it gets out of date.

What to write about? Look, it's EASY. I've just wasted several paragraphs to tell you just ONE TINY bit of information. If I can do it, so can you!. S.W.

Prologue of 1985. S.Mandalos

Paul is right. During 1984 The Dragon Update was formed and it is still carrying on showing the commitment to the Dragon micro. Most of all though the commitment to the people that have been subscribing for so many years has been outstanding. This level of commitment very few people can provide and Paul is one of them. I must admit that I have been quite impartial over the years and have not contributed myself as much as I wanted to. But there is one thing I would say and that is, all the computing related topics I have learnt started with the Dragon 32. Even during my University years the Dragon was an invaluable tool. I owe to it a lot, but I owe a lot more to the publications like the Dragon User and Dragon Update that provided my enthusiasm and willingness to carry on with it. Things are a bit different now, but we should all commit to The Update cause. Let's keep it running for ever.

Software & Hardware in 1985

Coming back to the series of these articles, I mentioned the last time that Eurohard took all rights to Dragon and also manufacturing (I think ...). The software houses that lived from the Dragon market, started to invest in different micros, Sinclair, Commodore, Acorn and Amstrad. But companies like Microdeal were still developing software for the Dragon, although writing software for Atari as well. In the charts compiled by Websters software the top selling games were: Hunchback by Ocean, Chuckie Egg by A & F, Manic Miner by Software Projects, Ring of Darkness by Wintersoft, Trekboer by Microdeal, Back Track & Eddie Steady Go ! by Incentive and of course Juxtaposition by Wintersoft. What about Total Eclipse by Eclipse-Fenmar Ltd and Speedracer, Module Man, Worlds of Flight, Grabber by Microdeal. This was a great year for software. All fantastic quality products. During this 1985 period we had some good pricing on the hardware itself by picking up Dragons quite cheap from companies that no longer thought it was good idea to hold stock. Some bad news for Premier, the company that developed DeltaDOS, the first DOS for the Dragon 32 ceased to trade. Everybody had gone with no trace. However, there were good news from COMET, the retail shops that were willing to stock Dragon 32s and 64s. To be honest with you I never saw them at COMET, maybe that some of you did. There was a interview by Eurohard's Eduardo Merigo Senior Merigo was clearly blaming Dragon Data's management for the lack of sales. There were some plans for further investment and the Dragon name would have been kept; things like Dragon 300 (a different system aimed at the professional market) bla bla bla. Did anyone see anything like this ? Of course not. The guys at GEC made their money selling the Dragon name and that was that. At least they got rid off a non-profitable product. It has been the sign of the times, "don't be fooled, form a good profitable company and sell it to make more money before it goes bust!". This was not the case with the Dragon, but Eurohard knew no better ! In the UK we had Ted Orpychal of Compusense that were helping the Dragon. By mid summer, Websters Software pulled out of the Dragon market. It was a shame because they had contributed a lot. But as I mentioned above, the software one could buy, were of great quality. John Penn picked up all stock from Websters and released it to the market at reduced prices. And apparently Compusense by August the that year saw the Dragon 128K. Oh yeah ? And what happened to it ? Who cared anymore anyway. In the meantime more news from Eurohard kept coming that "new Dragons will be developed" etc etc. Towards the end of that year Lucidata developed a new hardware interface for the Dragon which emulated the micro BBC B. The Dragon Claw was also developed, I believe that this was more of a prototype project, I am not at all sure if it was solved actively in the market. The Dragon Claw was another of those hardware projects that was asking the Dragon to do too much as far as I was concerned.

Epilogue of 1985

During that year there have been quite a lot of 6809 shows. I went to a few, invested in the dear micro and went home happily. It was a good year for the Dragon and me as far as I was concerned. The Dragon User was doing okay, the software was great and there were hardware projects and plans for the Dragon.

Quo Vadis?

It's very nice, I think, of Microsoft to ask me Where I Want To Go Today, but I'm not entirely convinced that they are listening. After all, I told them, Where I Want To Go Today is a place where a machine boasting ultra fast operating speeds actually goes ultra fast because it isn't bogged down by a hundredweight of useless front end software which does nothing but sit there and look pretty. Well, pretty awful anyway. And I Want To Go to a place where I don't need one thousand and one different cards to run things. And where, if I do have to buy a sound card, its output is not swamped by the noise of the cooling fans needed to run ultra fast processing chips without meltdown.

Where Do You Want To Go Today? Where Do Microsoft Want To Con You Into Going Today, more like!. Stephen.

More Books Reviewed. R.A.D

TRS-80 Color Computer Assembly Language Programming. By William Barden Jr. Published by Radio Shack. 294 pages.

Originally a very expensive volume, the sharper eyes found it redundant on the shelves for about £1 in later years, with many other older Tandy Books. This uses the Tandy EDTASM package for assembly and is intended for tuition with that Editor / Assembler / Debug system. Allowing for the differences in the commands between that and the DASM assembler for the Dragon, the book is very easy to follow, taking the reader through the 6809 step by step in all facets of its then powerful capabilities from the ground up. The first 18 chapters cover assembly language basics, the instruction set of the 6809, and use of assembler. The following 3 chapters show how to link the results with Basic programmes, how to pass parameters, and where to put the Machine code in Ram. Chapter 22 explains how to use some of the Basic ROM with assembly language routines, and Chapter 23 delves into the more advanced addressing modes of the 6809. The next two Chapters are classed as 'fun' with some graphics and sound assembly while the final one, Chapter 26 is devoted to guidance on making larger programmes. There are six Appendices of useful data to conclude.

Dragon Graphics and Sound. By Steve Money. Published by Granada. £7. 187 pages.

A book to explain, in simple terms, the facilities in the Dragon which produce differing Graphics displays and sounds. The low resolution text and graphics displays are examined firstly, with methods of producing lines and a sketchpad. Chapters which follow deal with the high resolution graphics modes, with construction of geometrical shapes and use of the colours available. Later chapters introduce vector graphics and the creation of high resolution text using vector graphics. Dealing with saving screens so produced it moves on to charts, graphs and pie charts, then to animation in both low and high resolution. Finally it explains some pseudo 3-D displays before the final chapter on Sound. That deals with both the sound and play commands, with advice on translating music to the Dragon from the musical score. Listings to each part demonstrate the commands.

Gone Missing?

The political types got it all wrong yet again, it wasn't Privatising that the Post Office needed, it was Educating!. Yes, the mail has been going astray again (Dave Cadman sent me a letter recently, and got it back a week later franked by just about every sorting office in the country and marked "gone away" which I certainly hadn't!). So, if you wrote to me during the past few weeks and didn't get a reply, either your letter or mine may have got lost in transit (or Freight Rover 4000, whatever they're using now). In which case please let me know (if the P.O will let you!). Paul Grade.

REMEMBER THIS ONE?

Paul Grade.

```

1 IFG=0 THEN PCLEAR8:CLS1:F=1:GOSUB4:F=0:CLS1:W$="BAGFEDCBBBBB":
L$="BAGFEDCCCCC":DIMA(6,6):R=RND(-TIMER):PMODE4,2:COLOR5,0:PCLS:
DRAW"BM20,20;NU3ND3NL3NR3NE3NF3NG3NH3":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:DRAW"BM0,96":PLAY"T1502L4CDEFGAB"

3      X=X+1:IFX=225      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 PROGRAM.

4      IFF=0      THENPSET(X,Y,5):Y=Y+D:IFPPPOINT(X,Y)=5      THENW=2:GOTO5      :ELSE
PSET(X,Y,0):GOTO3 :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$:RETURN

5      IFW=1THENPLAYW$:G=1:PRINT@170,"well      done";:PRINT@226,"PRESS      ENTER      FOR
SCREEN";S+1;:S=S+1:GOTO1:ELSEG=2:PLAYL$:PRINT@170,"you      failed";:PRINT@226,"YOU
GOT THROUGH";S-1;"SCREENS."::PRINT@259,"PRESS ENTER TO RESTART";:GOTO1

```

What is it? ... well, about ten years ago we ran a competition (for a Trojan Lightpen, I think), and this little program was sent in by Alan Cook, who was then about thirteen years old. It was a good piece of programming then, and by current standards it's even better programming now!. Five lines of Basic, to produce a fully working game, complete with instructions, sound, and a progressive level of difficulty!. Now no-one seems able to write even the simplest of programs in under four Meg of compiled garbage, so why not type this one in, run it, play it, and then see if you can do something similar, better!. It's time programming got back in touch with reality again. [One point to watch when typing this in, some lines are VERY close to the 255 limit, so don't add any extra spaces!]. P.G.

G4BMK SOFTWARE NEWS. Johnny Brown.

I am collecting Grosvenor Software Amateur Radio software, on cassette, disc, or even cartridge, for redistribution to other N.D.U.G members who may be interested. It is all "above board", Grosvenor have given me permission for this venture, also the necessary paperwork, and this is intended to be totally non-profit, some small charge would have to be made to cover photocopying, postage, etc, of course, but other than that all you will need to do is supply the media for a copy. So please, hunt out your old Grosvenor Software radio software, and send it to me, Johnny Brown, 45, Marlborough Avenue, Falmouth, Cornwall. TR11-4HS, and help keep both the old Dragon and Amateur Radio alive!. Mike Kerry (Grosvenor) is now concentrating exclusively on the PC world.

UP-2-DATE HELP WANTED.

Ray Smith has asked me to mention that Nev Simmons, who has been handling the copying and distribution side of Up-2-Date production (and making a VERY good job of it too!) would like to pass the job on to someone else in the near future, as other commitments mean that he now finds it increasingly difficult to find the necessary time. So, a volunteer is required. Apart from a certain amount of enthusiasm, of course, you also need a Dragon, preferably a D64 but a 32 would do, and reliable twin disc drives. If you think you can help, contact Ray or Nev.

The Late, Late Bit

It always happens just when I think I've got everything sorted out for getting Update ready to print, SOMETHING always manages to go wrong ... someone wants to change half the article they wrote, or wants to cancel an advert just when I've got the ads pages finished, or there's the standard crop of mechanical disasters this time a full page advert I was expecting had to be cancelled until the next issue, which has left me with an additional page of "something" to invent, hence the somewhat demented drivel on page twelve, but if you can do any better at short notice, go ahead, you won't hear any objections from me!. Anyone remember Mike James, former "Dragon Expert" and writer of innumerable magazine articles? having read some of his current writings I think he must have caught the same "Out-of-this-World Virus" that affects the majority of politicians! in one piece he happily excuses Intel's release of the Pentium that can't calculate on the grounds that "you wouldn't expect the first release of a software package to be bug free, so why expect it of hardware?" dunno about you, but if I were paying a few hundred pounds for a software package I'd make damned SURE that it was bug free, otherwise the producer would get it back rapidly along with a warning about the Sale of Goods legislation!, and if I paid a couple of thousand pounds for a computer that failed to compute the vendor would be well advised to renew his life insurance policy!. What a damned stupid attitude!. In the same magazine was another prize quote ".... modern commercial software is written by teams of hundreds of dedicated professional programmers" ... and doesn't it show! perhaps the software would be better if some of the "team" had actually met and decided on what the program was supposed to be/do!.

Anyway, to business for a moment: a couple of our remaining "overseas subscribers" have been enquiring once again about paying their subscription renewals by "International Credit Transfer" direct to the Group account. In theory, this is the simplest way, of course, but there is one ENORMOUS snag Mohammed McSvensson trots down to his friendly local bank and asks them to transfer the equivalent of 132.958773 Transylvanian drachma (£9.00 Sterling) to Giro account number 169398307 (that's us!), and if they aren't using a Pentium Powered Abacus and his account can stand the strain, they happily do so. However, although Giro then notify me that the said amount has been transferred to our account, when the actual statement arrives the transfer is somewhat offset by a £5.00 transaction charge, which means that so far as Group funds are concerned, we've just renewed an overseas subscription for FOUR POUNDS!!. Not exactly profitable, is it?. So to save anyone else asking, payment can be in ANY local currency, or by Sterling cheque, but NO CREDIT TRANSFERS!. OK?.

It's not that I'm being mercenary, but trying to keep the Group account in a reasonably healthy condition is the sort of job that makes running the Malaysian branch of a merchant bank look like child's play!.

I suppose I ought to say something or other about Update having survived to reach a hundred issues, but other than "there has to be a better way of going mad than this" I haven't a clue WHAT I'm supposed to say!. We've very few members remaining who were on the mailing list for Issue 1, I think we must have bored most of them to death long ago, but I would like to say thanks to those heroic few who HAVE managed to stay with us from the very beginning it says much for your dedication to the Dragon that having read Issue 1 you not only failed to demand an immediate refund but actually kept on renewing your subscriptions!. Now that's REAL loyalty!. Wonder if we ought to issue a Long Service Medal or something similar?.

Before anyone is foolish enough to ask the odds on Update reaching Issue 200 are of the same order of probability as you winning the Lottery jackpot every week for the next year or at least, they are if you expect ME to still be running it by then!. Er ... if you DO manage to win the jackpot every week for the next year, I suppose you wouldn't consider the purchase of a second-hand User Group, good condition for age, never raced or rallied, etc?. Price negotiable!.

Oh well, it was worth a try!.

Paul Grade.

Historical Facts (?)WHY WE HAD TO WAIT.

It was a hot day in early June, or it would have been if anyone had invented the calendar, and Urk was leaning against a handy rock (well, it WAS supposed to be the Stone Age) scratching at fleas and watching Slob hammering away with his latest invention, (the stone hammer,) at nothing at all. Slob was a real genius, and had already invented several new sounds which he used loudly whenever he hit his thumb with the hammer, but hammering at nothing seemed just a little eccentric, even for a genius. "Maybe I'm missing out on something, but why are you thumping all that nothing?", asked Urk. "It's not nothing, you Neanderthal prat", said Slob, "it's my best invention yet". He scrabbled around in the dust and eventually produced a minute piece of stone. "Look, this is going to be the greatest invention the world will ever know". Urk scratched his head, much to the annoyance of several gross of fleas. "You're right out of your tiny cave, mate, if you think you invented little bits of rock, they were here a long time before you were ... I reckon you've been out in the sun too long again". "These aren't little bits of rock, they're chips", screamed Slob, "they're the New Technology, and one day they'll be in every cave". "They are now, but they hurt your feet, so we sweep them outside", replied Urk, beginning to wonder if Slob had been hitting his head as well as his thumb, "what makes you think that people will want to get sore feet?". "No, these are SPECIAL chips, and when I've thumped them into the right shapes I can use them to invent a thing called a computer", explained Slob, "that will be a thing that everyone will want". "Can you eat computers?", inquired Urk hopefully. "Of course not, you walking stomach", said Slob, "when we've made them we can exchange them for money, then we'll be rich, and we can use the money to get anything we want". "Er, what's money?" asked Urk hesitantly. "Well, it's something else I'm going to invent ... it will probably be special pieces of stone with sort of designs on them, and people will exchange them for food, weapons, semi detached caves, computers, and things". Urk bravely thought for a while, which was a very painful experience, but eventually he gave up ... "Look, Slob, let's see if I've got this straight, what you're saying is that we make these computer thingies out of little bits of rock, and then people will give us bigger bits of rock in exchange for them, and then we can give the bigger bits back to them and they'll give us food and all that sort of thing in exchange for those. Right?". "Yes, it's called commerce, and it's going to be a big thing one day" explained Slob patiently, "and then there will be lots of it and it will be called an economy". "No way", replied Urk, "no-one is ever going to be THAT bloody stupid, and anyway, it's far simpler to thump people with a BIG bit of rock and help yourself to the goodies, saves all that work". Slob considered this for a while, "You're quite right", he conceded, "people wouldn't really be that gullible", and picking up his stone hammer he thumped Urk on the head with it, pinched the Mammoth sandwich Urk had been saving for lunch, and forgot all about chips and computers, which is why they weren't invented for thousands more years people simply weren't daft enough!.

It's a Little Known Fact, but ...

Perhaps you have never heard of Nell, but in her day she was famous, if not notorious, for her ability to drink enormous quantities of beer, and her greatest feat was the consumption of a firkin of beer (almost forty gallons) in one session, much to the astonishment and disbelief of the onlookers!. So much so, that even to this day her name is used as an expression of shock and astonishment who can have failed to exclaim, under such circumstances, "Firkin Nell!"?

What makes you think this is a load of old garbage that the Gaffer has cobbled up just to fill a page?. It all sounds perfectly credible to me, and it makes a lot more sense than the rubbish I'VE just been reading in a commercial magazine, all about "Interactive Media Data Technology" and how THAT is "the thing of the future"! If you know better, prove it!. Paul G.

GROUP ADVERTISING PAGES

DOS ADAPTOR KITS

DOS ADAPTORS FROM SUTCLIFFE ELECTRONICS ALLOW YOUR DOS TO FIT INSIDE YOUR DRAGON. PRICE JUST 16.68 INCLUSIVE. LETTER WRITER UTILITY PROGRAM NOW FREE!. JUST SEND A DONATION TO COVER COSTS!.

BASIC 42 FOR DOS V1.0 OR E6 ALSO AVAILABLE, SMALL CHARGE FOR PHOTO-COPYING MANUALS WRITE FOR FURTHER DETIALS.

QUERIES AND ORDERS TO: J.SUTCLIFFE, 15, WEST STREET, HOTHFIELD, ASHFORD, KENT.

P.D. SOFTWARE LIBRARY.

DOZENS OF PROGRAMS AND ROUTINES ON TAPE OR DISC ALWAYS AVAILABLE. NEW (ORIGINAL) MATERIAL ALWAYS WANTED. CONTACT STUART BEARDWOOD AT 38, SALISBURY PLACE, BOOTH TOWN, HALIFAX. HX3-6ND.

FOR SALE!

DRAGON 32, COMPLETE WITH ALL LEADS ETC. HARDLY USED AND IN PERFECT CONDITION. BARGAIN AT £15.00 INCLUSIVE. PHONE BARRY ANDERSON (Snr) ON 0171-474-3855 (PLAISTOW). EVENINGS ONLY, PLEASE.

WANTED!

DRAGON 64 (ONLY!) POWER/MODULATOR BOARDS ... IT DOESN'T MATTER WHETHER OR NOT THEY STILL HAVE THE MODULATOR OR POWER SWITCH FITTED. TWO NEEDED IF POSSIBLE.

J.ROGERS. F5, 115, CHURCH ROAD, RICHMOND, SURREY. TW10-6LS.

PHOENIX MIDI INTERFACE.

IF YOU HAVE A MIDI KEYBOARD OR OTHER MIDI DEVICES, BUT NOT ENOUGH HANDS TO PLAY THE VOICES YOU WANT ALL AT ONCE, THEN THIS IS FOR YOU!!.

THE DEVICE HAS STANDARD MIDI IN, OUT, AND THROUGH PORTS, AND CAN BE INTERNAL (TOGETHER WITH DOS CARTRIDGE) OR EXTERNAL FITTING. SUPPLIED WITH THE NECESSARY SOFTWARE TO PLAY TO MOST KEYBOARDS USING STANDARD MIDI CODES.

INTERNAL (uncased)£30.00

EXTERNAL (cased)£35.00

Ian Jones, 2, Rushton Drive, Middlewich, Cheshire. CW10-0NJ.

Phone 0606-834473 evenings only.

WANTED! !

WANTED FOR USE WITH A COCO 3. TAXAN RGB COLOUR MONITOR. MUST BE MODEL NUMBER KS12R102S-B.

IF YOU CAN HELP PLEASE TELEPHONE PAUL MARLOW ON 01922-723992 (EVENINGS OR WEEKENDS ONLY, PLEASE.).

DRAGON 64 SYSTEM FOR SALE!

COMPRISING 1 DRAGON 64, GREEN SCREEN MONITOR, CUMANA DISC DRIVE AND DRAGON DOS CARTRIDGE, ALL POWER SUPPLIES, LEADS, AND HANDBOOKS, AND A QUANTITY OF DISCS, SOME WITH SOFTWARE, PLUS SEVERAL BASIC BOOKS. ALL IN PERFECT ORDER AND MOSTLY WITH ORIGINAL PACKAGING!. OFFERS AROUND £75. COULD DELIVER WITHIN 50 MILES OF CHELMSFORD, BEYOND THAT BUYER MUST ARRANGE. PLEASE CONTACT: BRIAN THWAITES,

118, BADDOW HALL CRESCENT, GREAT BADDOW, CHELMSFORD, ESSEX. CM2-7BU.

NEW RELEASE FROM UP-2-DATE!

THE LONG AWAITED UP-2-DATE COMPILATION DISCS ARE NOW AVAILABLE!. DISC 1 IS MAINLY DUMPS FOR EPSON PRINTERS AND INCLUDES THE ABILITY TO PROCESS COMPRESSED GRAPHICS. DISC 2 IS A COLLECTION OF UP-2-DATE "SHOWCASE" PROGRAMS. DISC 3 IS A COLLECTION OF GRAPHICS PROGRAMS, MANIPULATORS, EDITORS, CREATORS, ETC. DISC 4 IS A LARGE COLLECTION OF COMPRESSED GRAPHICS, PLUS THE "PAKKER" PROGRAM FOR COMPRESSING/DECOMPRESSING. PRICE IS £3.50 INCLUSIVE PER DISC, OR THE FULL SET OF FOUR FOR JUST £12.00. AVAILABLE EITHER FROM RAY SMITH, 5, GLEN ROAD, PARKSTONE, POOLE, DORSET. OR FROM PAUL GRADE AT THE USUAL ADDRESS. ALL CHEQUES PAYABLE TO N.D.U.G, OF COURSE.

NEXT ISSUE IS NUMBER 101, BUT FOR THE BENEFIT OF ORWELL FANATICS, THAT IS
UPDATE 101, NOT ROOM 101, SO DON'T PANIC!

GROUP ADVERTISING PAGES

DRAGON DETOUR ADVENTURE GAME now £3.00
 EZEE ADVENTURE WRITER UTILITY £3.00
 EZEE M/C TUTORIAL DISCS 1&2 (ech) £3.00
 R.A.D FUN DISC (24 progs) now £2.50
 R.A.D ANITUNES (music & pix) £2.50
 R.A.D BEST OF INPUT LISTINGS £2.50
 DISC EDITOR UTILITY £2.50
 DRAGON/COCO DISC CONVERTER £3.00
 COCO/DRAGON DISC CONVERTER £3.00
 DRAWEZEE GRAPHICS UTILITY(T or D) £2.50
 NDUG FORTH OS & ASSEMBLER now £4.50
 LOTTERY NUMBER GENERATOR £2.00
 AMATEUR RADIO UTILITIES(2 discs) £4.00
 DAVE CADMAN'S POETRY DISC now £2.50
 EINE KLEINE NACHTMUSIK DISC now £2.50
 DISC UTILITIES COLLECTION No2. £3.00
 RAMDISK EXTRA DISC now £3.00
 NEWCOPY TAPE COPY UTILITY(T) £2.50

DRAGON 32 & 64 CIRCUIT SHEETS £1.00
 DRAGON/COCO/CUMANA DOS SHEETS £1.00
 D32 TO 64k UPGRADE MANUAL £2.00
 GROUP HELPLINE LIST REPRINTS £0.50
 DRAGON MUSIC QUIZ DISC. now £3.00
 DRAGON SUPER QUIZ DISC. now £3.50

PC/DRAGON EMULATORS! ..TWO PROGRAMS
 TO RUN DRAGON/COCO SOFTWARE ON YOUR
 PC. ONLY £5.00 THE PAIR!. AVAILABLE
 IN ANY PC DISC FORMAT. *£5.00 INC.*
 (New updated versions now ready!).

PLEASE SEND ALL ORDERS TO PAUL GRADE
 6, NAVARINO ROAD, WORTHING, SUSSEX.
 CHEQUES PAYABLE TO N.D.U.G. PLEASE.

LOTTERY NUMBER GENERATOR ... £2.00

+++++

The Dragonart Graphics Library

CONTAINS THE BIGGEST SELECTION OF DRAGON GRAPHICS SCREENS ANYWHERE!, PLUS A
 LARGE SELECTION OF MAINLY GRAPHICS RELATED UTILITIES, SCREEN DUMPS, ETC. ALL
 AVAILABLE TO YOU AT A SMALL NOMINAL CHARGE. FOR FULL DETAILS AND LISTS WRITE TO
 THE LIBRARIAN, 5, GLEN ROAD, PARKSTONE, POOLE, DORSET. (enclosing s.a.e please).

DRAGON NOTEBOOK

HUNDREDS OF USEFUL HINTS AND TIPS ESSENTIAL READING FOR ALL DRAGON USERS.
 JUST £3.00 FROM THE DRAGONART LIBRARY AT THE ABOVE ADDRESS.

UP-2-DATE DISC MAGAZINE

THE BI-MONTHLY DISC MAGAZINE FOR ALL DRAGON USERS (ALTERNATES WITH UPDATE). AT
 JUST £2.00 PER COPY YOU CAN'T AFFORD NOT TO SUBSCRIBE!. SEND YOUR ORDER NOW TO:
 UP-2-DATE EDITOR, 5, GLEN ROAD, PARKSTONE, POOLE, DORSET. CHEQUES PAYABLE N.D.U.G

D.T.P. PROGRAMS FOR THE DRAGON

THE GROUP DESKTOP SYSTEM, IN DRAGON OR COCO DOS VERSIONS, WITH DOZENS OF FONTS
 AND FORMATS, AND HUNDREDS OF USES!. AVAILABLE ONLY FROM THE DRAGONART LIBRARY.
 CONTACT THE LIBRARIAN FOR FULL DETAILS AND VERSIONS AVAILABLE. STILL THE
 CHEAPEST AND BEST DTP AVAILABLE ANYWHERE FOR THE DRAGON!.

UPDATE BACK ISSUES

Reprinted to order at just 7 pence per side copied. (average cost 98P per issue
 inclusive.). Please send your cheques & orders to:

ALAN GREENWOOD, 132, WENDOVER DRIVE, ASPLEY, NOTTS. NG8-5JN.

DRAGSOFT SHAREWARE.

"DATA MAKER", TURNS M/S INTO DATA FOR BASIC PROGS. "SETTER" ADJUST YOUR DRAGON
 FOR BETTER COLOUR AND SOUND. "SLOW BUT SURE" EPSON SCREEN DUMPS .. EXTRA SMALL
 TO A4 .. ALL 5 HI-RES, LOW-RES, AND TEXT. ALL NOW AT £2.00 EACH PLUS A SMALL
 DONATION TO BE SENT TO N.D.U.G FUNDS. PLEASE STATE DRAGONDOS DISC OR TAPE.

CHEQUES/PO'S MADE PAYABLE TO:-

MIKE TOWNSEND, T/F, 48, HEWLETT ROAD, CHELTENHAM. GL52-6AE.

ALWAYS WANTED! ALL AND ANY SCRAP (DEAD/OBSOLETE) PC TYPE BOARDS AND CARDS, FOR
 FAULT TRACE INSTRUCTION PURPOSES. IF YOU'VE ANY SPARE, LET ME KNOW. PAUL GRADE.

ORIGINAL ARTICLES, LISTINGS, ROUTINES, ETC ARE ALWAYS REQUIRED FOR PUBLICATION
 IN BOTH UPDATE AND UP-2-DATE, SO SEND YOURS TO THE RELEVANT EDITOR NOW !.
