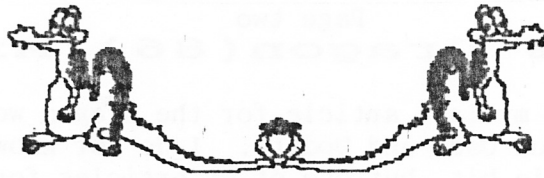


**DRAGON**



**UPDATE**

\*\*\*\*\*  
CHAIRMAN: Paul Grade. 6, Navarino Road, Worthing, Sussex. BN11-2NF. 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 130 THE END OF THE LINE. APRIL 2000  
\*\*\*\*\*

## THE GAFFER'S BIT . . . . .

Well, that's it .... it's been a long run, and a good one, but even the best of things has to end sometime. I suppose I ought to follow tradition and make this a page full of name checks, but I'll leave that for the Late Bit and use this space to sort out the essential odds and sods. So, first thing, obviously, is money (isn't it always?!). As I said earlier, anyone who requires a refund of unused NDUG subscription has only to ask, BUT, as the NDUG account has to be closed out it is imperative that any such requests arrive here as soon as possible, so that all transactions can be cleared before the account is closed. So, April 14th. is the absolute latest date that I can accept any refund requests. OK?. Any "surplus" left when the account closes will go towards the "Editorial Drinks Fund" ... an ancient Update tradition, as many of you will no doubt recall!. Personally I think Mike and Stephen deserve doubles all round at the very least!. (Come to think of it, I reckon the old Group owes ME one as well!). As you'll see from the ads pages, I will be continuing to make a lot of the "Group software" etc available, and Keith Nash, Alan Greenwood, Tim Lees, and Stewart Orchard will still be able to provide their usual services. As to Up-2-Date, that seems more than a little uncertain ... I understand that Ray will be producing one more disc based issue, but after that he may/may not be continuing U2D in "emulator format" for download as e-mail file attachments. I have absolutely no further information on this point, so you'll have to take up any queries with Ray personally. Sorry. I think that covers most of the "business" side of things, so I'd just like to thank you all for making the Group possible and for keeping it alive for so long. Quite an achievement, and you should be feeling justifiably proud of yourselves.

## THE EDITOR'S BIT . . . . .

Well, announcements of doom and disaster get people moving, it seems. A few articles have appeared for this issue; the last chance to get in print was something of a wake-up call. But, a wake-up call too late. The doom and disaster warnings weren't so much announcements as statements of fact, and yes, despite the date, no fooling. This really IS the last issue of Dragon Update. Well do we remember the edition of Dragon User which carried the story of Dragon Data's demise, and made much of being an independent publication and thus not affected by the manufacturer's problems. That held good for a few years, but ultimately the effective shutdown of new machines and products meant the end of the road for the rest of the bandwagon. And now Update has arrived at the same point. Always an independent production but, unlike Dragon User, directly affected by Dragon Data's woes - that infamous moment when the Welsh beast's dying gasp gave rise to the NDUG - time has been called because things have moved on and the Dragon has been moved away from daily, intensive use, and into a place of fond nostalgia. It's been a 15 year ride, but this is a point that we knew would come eventually. Thank you to everyone who has participated in Dragon Update over the years; in an age of 500MHz monsters, it breathed fire until the last. Stephen

**Peeking The Dragon(86).Mike Stott**

So I have finally reached my last article for the Dragon world after many years of writing for Dragon User and Update. I do not know how many years I have been trying to do my little bit, but one of my articles for Dragon User in 1988 mentions that this was the Chinese Year of the Dragon, and I think I had written two Peeking The Dragons for Update before that and several reviews for Dragon User (\*\*"Peeking" first appeared in Update 38, October 1987...SW\*\*). That same year I wrote about the Ossett show held on Saturday 30th April, at which there were 350 paying customers. It may sound a lot now, but I can remember three-day shows at Manchester UMIST where the rooms were absolutely bulging everyday. Shortly afterwards I became Software Editor for NDUG. This has now set me thinking - it is now the Year of the Dragon again, and I am waiting for my huge redundancy payoff. (Got change for a 50P piece, Mike?). Is it possible I started and finished the job in Years of the Dragon? I think it is, but I am not certain.

In the January issue of Up2Date I read that Ray Smith was considering carrying on with his disk based magazine and my spirits were raised until I saw that, if he did, it would only be in emulator form transmitted by email. At present I can only be contacted by telephone or snail mail. I have recently started to subscribe to OnDigital and they say that email is coming in the near future, but it will probably only be messages and not files that can be sent and received. I have decided not to attach a modem to my old 486 machine, although my wife and I are considering purchasing a more state of the art machine in which case we would get a modem. The reason for this is that she is a schoolteacher and there is a scheme at the moment whereby teachers can get half the price (up-to 500 pounds) off the cost of a computer at home, as long as it meets certain criteria. If we do go ahead I will then be able to send and receive e-mails, and would be able to keep up easier with what is left of the Dragon scene. In the meantime, please feel free to write or telephone me if you think that I can be of any assistance whatsoever. I will always be glad to help anybody out with any queries that they may have.

The last few years as Software Editor have been completely different from the early days, when I was continually writing to software companies asking for software to review and for news of forthcoming releases. At first I had very few programs to review, and was able to review them myself as well as doing the article. Very soon, however, I was inundated with software, and had to beg for helpers. I think Phil Chatfield was my first reviewer, and he was soon joined by a small army of volunteers who proved to be very helpful in those early days, and we were continuously in touch with each other sorting out the many problems encountered with the different programs. Frank Fisher, Raymond Roach, Julian Osborne, Dave Cadman, Geoff Smith, Peter Gent were among my early reviewers, as were several members of the North East Dragon Users Group, and I would like to thank everyone of them (sorry to those whose names are missed out) for all the help they gave to me and NDUG in those early hectic days. I would also like to take this opportunity to say thank you to all the people who used to help me out on the NDUG stands at Ossett, Stafford and the other shows we attended and also to everyone who used to come and buy software, ask questions, help out with queries, or just come over for a chat. I will miss seeing everyone of you and hope that we might bump into each other somewhere. Please come over and say Hello if you do spot me somewhere. I will always be glad to see any of my old Dragon friends.

To Paul and Stephen I would like to say that it has been a pleasure working with you on Update, and our many thanks go to you for keeping it going so long. You had a much harder job than I had, especially Paul who has not had a break since NDUG started so many years ago. GOODBYE. Mike.

**Dragons still with me. D.Linsley.**

I've owned a Dragon 64 since Christmas 1984 - my mother bought it in May of that year, as the local computer shop was selling them for only £150 - just £10 more than the Dragon 32? At the age of 10, this was my first step into home computing. A couple of weeks later, the most stupid thing I've ever done with a computer happened. In the January 1985 issue of Dragon User was a program to play Q-Bert (a fantastic arcade game). The print on the page had more columns than the Dragon's display did on my 14" black and white TV, so I took the Dragon downstairs and plugged it into the 21" TV. I presumed that more would be displayed - and never realised it wasn't until the next day when I took the Dragon back upstairs. By this time though I had stopped my parents from watching TV all day - including Benny Hill if I remember correctly - and of course couldn't get the thing to run because of errors I'd typed in. They weren't best pleased!. Once Dragon User folded I sold my Dragon (by now it had a monitor, printer, disc drive etc) and bought an Atari ST. Two years later I was back buying another Dragon, and started using OS9 with a vengeance. This led to my A-level computer studies project being written in Basic09. Essentially BASIC but with C structures and no global variables, it enabled the multi-tasking and multi-power of OS9 to be harnessed for any application. Although I had to cart my Dragon to school twice a week (and in the process, smashed a school TV by dropping it while moving it) it was worth it. A much-better solution than I could have created with the Acorn machines.

By autumn 1993, the Dragon was on the back burner again. This time for a Commodore Amiga A1200, though inevitably this made way for a 486 PC two years later. In 1997 I graduated from York University with a masters degree in electronic engineering, and emigrated from my native north-east to Suffolk (it's a long way south!) to work for a small start-up (6 employees) in Bury St. Edmunds called STNC Enterprises, which wrote the software to enable small devices to access the internet, with products including PsiMail Internet (TCP/IP stack and email application) for the Psion 3, the web access libraries for the Psion 5, and now Symbian Epoch32 OS, and a web browser for the Brother GeoBook.

My work was to write a demonstration microbrowser in 6 months. A microbrowser is essentially a web browser designed for devices with a small screen and limited input capability, commonly a mobile phone. Regular functionality in a desktop browser, such as frames, nested tables, and background images, are removed to optimise the use of real estate on the screen (typically 96x48 pixels). Access to useful information such as train timetables is more important than glossy presentation. In February 1998, HitchHiker was demonstrated at the international GSM congress in Cannes, and work began (with additional programmers) on a commercially viable version. However, small companies often require to take on work to fund other development, and so by the end of the year I was technical lead on a new product. This is due to have hit the shelves of your local Dixons by the time you read this (April 2000) and is an email device by a well known British electronics manufacturer. Reward for the hard work we put it creating HitchHiker came when the Design Council awarded us a Millennium Product award. A plaque to recognise this apparently hangs in the Millennium Dome (so it's good for something then, Paul!). Of the two that the company received, one takes pride of place in my living room - given to me in recognition of the contribution I made to the company. In July 1999, Microsoft came knocking on our door, and purchased us for our microbrowser technology. As the architect (and also as a programmer) of the software this felt amazing - having the largest company in the world recognise your work as being something they want is cause for a huge ego-trip. By now many of you will have heard of Microsoft Mobile Explorer, which is what our microbrowser has become, and mobile phones that use it will have been announced by Sony and Benefon. These should be available in the summer, and believe me they look good already!. And so now I work for the "evil empire", the company whose name appears every time you switch on your Dragon. Now that has to be cool, doesn't it?



**Bargains Galore ... Keith Nash**

There has never been a better time to join the 32-bit revolution, as perfectly usable machines are now being discarded by owners who have upgraded to the latest overpriced offerings. Machines that originally cost thousands of pounds can be purchased for 10% of their original price: and these are machines that will run nearly all current software (except graphics-intensive games), albeit sometimes slowly. My preference is to buy machines by well-known manufacturers: although for the same price the specification will be lower than for a machine made by an unknown manufacturer, this is more than compensated by improved stability - an important issue, particularly when running software that was written after the computer was designed, or indeed when running any Microsoft software. Machines made by IBM, Dell, Compaq, and Hewlett Packard are often to be found on the secondhand market, probably because these top brands were popular with corporate customers who have now upgraded. At a recent computer fair in Worcester, numerous 486 laptops were selling at £200 or less. I bought a Compaq Contura 420CX, with a 486DX4 CPU running at 75MHz, with 16Mb of RAM, a 500Mb hard drive, a 640x480 TFT colour screen, and a 3-month warranty for £170. Not a fast machine by modern standards, and a low-resolution screen; but perfectly good for most tasks: I use it with Windows 95 to surf the internet, run office applications, and do some programming. It's a little slow, but not to the point that it's frustrating, and it's really useful for computing when I'm not at home. Things that I wouldn't try on this machine are running games such as Quake or Tomb Raider (the CPU and graphics chip are too slow), have a dozen applications open at the same time (with only 16Mb of memory, all the tasks would run very slowly), or install all the software that I have acquired from magazine coverdisks (a 500Mb hard drive can comfortably hold Windows 95 release 1 and several large applications, but not the hundreds of large applications that a modern multi-gigabyte drive can accommodate). If you don't need these capabilities, why pay £1000 for a modern laptop?. At the same fair, there was a Dell desktop computer with a Pentium 90 and a 17" monitor, again selling for £170. Both computers are still useful machines; only 6 years ago they were the best in their class, and would have cost more than £2000 each. If you prefer to avoid the PC, there's more good news: second-hand machines such as the Atari ST and Amiga are even better bargains, and can often be found at car boot sales. Expect to pay £30 to £50 for an Amiga 600, and up to £90 for an Amiga 1200. These are the most useful Amiga models since they have a built-in interface for a 2.5" IDE hard drive. The Amiga 500 or 500+ do not have this facility, and cost from £20. Amiga Format magazine is still published, and its advertisers offer hardware expansions and software (mainly for the A1200). With any luck, you will find second-hand software offered with a 500, 500+ and 600, but if not, there is still plenty available as public domain or shareware, and a few commercial titles. All Amigas connect to a TV (with the 500 and 500+, make sure you get the external TV modulator: with the 600 and 1200 this is built in to the main unit). However, for best results, a monitor is recommended. The best news of all is that there are Dragon emulators for both the Amiga 1200 and the PC, so you can run your favourite software on these machines!. While on the subject of car boot sales, there are noticeably fewer 8-bit computers on sale these days than there were 5 years ago: in their place are the 16-bit Amiga and Atari, and also the Sega and Nintendo 16-bit games consoles of the generation before the current one. Expect to pay £25 to £50 for one of these consoles in working order, depending on the number of games included, and the amount of wear and tear. While reading a games magazine recently, I was reminded that some of the best games ever made were written for Sega, Atari, and particularly Nintendo consoles, and never made it to other platforms. This is because these games were the property of the console manufacturers themselves, rather than the 3rd-party multi-platform developers who have dominated the "real-computer" games market from the heyday of the Dragon until the present day. So for those of us who enjoy retro gaming, the consoles are well worth a look. If you do buy second-hand, remember to ask what warranty the goods have, and make sure that you get a receipt. If buying at a car boot sale, it is a good idea to ask for the seller's address and telephone number.



## The Good Old Days...Clive Scott

Although I have not been a member of NDUG since its earliest days (I joined after the Dragon User magazine folded) I have been a Dragon owner from the beginning. Mine was one of the first machines off of the production line, with its funny piggyback memory board. It has been very reliable; the only 2 times it broke down were my own fault. I bought an expansion box from Wessex computers, which looked like a DragonDOS cartridge with a large box fixed to the end. The idea was that you could fit four cartridges in, and switch between them via software. The software was full of bugs and didn't work - once a cartridge started e.g. EliteCalc, there was no way of switching out of it. Worse still, this large contraption tended to move relative to the Dragon, causing frequent system crashes.

I came up with the idea of making up 2 small PCBs connected via a very short ribbon cable. This was fitted between the cartridge and the cartridge port without any crashes. However, you had to be very careful how you fitted the PCB. One of the lines carries power to the cartridge - if this is crossed with the next track, power is fed back to the motherboard and the SAM chip is blown. With a small board like this, it was easy to feed it in slightly skew wiff. I did this twice, and each time blew the SAM chip, which controls the display, and when it is not working you just get gobbledegook on the screen. Luckily, a person called Nick Spiers was on the scene at the time, and he sold spare parts for the Dragon and I was able to buy a new SAM chip and fit it to the motherboard. When I purchased the Dragon, there were very few software titles available - only about 6 from Dragon Data on cartridge and tape. They had a Personal Finance package, which was so poor that you were better off using the back of an envelope. Luckily, the Dragon came with a very good version of BASIC. It may not have had all the bells and whistles of BBC Basic, but at least it was standard and it didn't require loads of obscure peeks and pokes like the Commodores did. Therefore, I wrote my own finance package, which went through a number of different versions and was quite sophisticated at first. Sadly, it eventually gave way to an American package that I was running on the first of my PCs. Even word processors were not available in the early days, so again I wrote my own. It is a bit of an exaggeration to call it a word processor - it was more of a line editor, like the infamous EDLIN on the PC. Nevertheless, I used it for a number of years, for writing letters, agendas, and minutes - I was a trade union rep at the time. I eventually replaced it with TeleWriter, which was much more powerful. Like all early Dragon owners, I used cassette recorders for off-line storage. I first used an old Philco machine, which I had bought earlier to play and record music. However, it had automatic recording level, which didn't work very well with the Dragon, because it didn't send a long enough leading tone to set up the recorder. I eventually replaced it with a Sony machine which was much better. However, even with short computer tapes (C8s, C15s) finding a file was a slow business. If you loaded a file and then edited it, you couldn't save it back to where it came from, because it was a different length. As a result, you tended to have several versions of a file and you had to remember which was the latest one. The Dragon, even on its disc system, doesn't save any dates with the file. Of course, when I bought my floppy disc drive, it was a revelation. Instant access, fast load times, huge capacity! Of course, for the same money now, I could buy a 27Gb hard disc. Nevertheless, it boosted productivity no end, and it opened opportunities not available with cassette recorders. It was more like a real computer. Sadly, like most Dragon users, the Dragon hasn't been in regular use for a number of years, and I currently use a PC with the inevitable Microsoft bloatware installed. I miss the simple days of the Dragon, and occasionally get the Dragon down from the attic and reminisce about the "good old days".

*\*\* Hey!, you think the old Dragon was slow working from tape?! .... you should have tried the original IBM PC using its tape socket, or better still a PET or a 4032 .... some of those are probably still loading!!. Paul.*

**The Last Update..Gareth Tuttiett.**

Well, I suppose it had to happen. The last Update to be printed and alas will no longer drop through my letterbox. It's sad, but it had an excellent run. At least all is not lost, there is the IDUG, so we can still keep in contact with fellow Dragon users. I thought I'd do a bit of nostalgia here - no don't yawn, it's interesting, honest. Way back in the dark ages before the PC became dominant, there were many microcomputers that appeared in a very short time. There were micros like the BBC, ZX-80, ZX-81 & Spectrum, Oric-1 (not bad graphics either), Electron, Aquarius, numerable Ataris, Commodore VIC-20, Memotec, TRS-80s and CoCos, etc. Dozens of the little beasts, but only one that caught my eye, the Dragon. At this time there were also television programmes given over to the things. Who can ever forget Mac, Frith and Lesley Judd on the BBC's "Computer Programme" which featured the mighty BBC micro and the spin-off book "30 Hour BASIC". It certainly was a dynamic time with so much excitement about computers and at least from about 1980 to 1983 the micro enjoyed a boom. However, lurking in the shadows was the IBM PC which, let's face it, wasn't much of a challenge to the home micro at the time. The first whiff for me of the PC arrived with the Amstrad PC1512s in about 1985/6 and the micro boom was fading with fewer and fewer players in the market including our beloved Dragon. The PC started to become a consumer item. Now during this time, the Microsoft empire was building, but there were many players in the market and so Bill and Co didn't have it all their own way. Microsoft had only one real competitor in the DOS market namely DR-DOS, but even this faded away somewhat. Ever used Windows 2? I have had the pleasure (not). It was no more that Microsoft's answer to Lotus Magellan (which I still use) and compared with GEM (again I still use this) it was a non-starter. I first came across Windows 3 in 1991/2 and being a GEM user I didn't like it; after all who would need anything better than First Word Plus to write things? And Supercalc 4 or Lotus 123 were the bees-knees in spreadsheets, with Paradox and dBase being all you could ever want in databases.....unfortunately Windows didn't go away it just started appearing everywhere and soon DOS applications were being left behind. Let's face it, Microsoft were clever in the way they exploited the PC and the way they pushed MS-DOS and Windows to be the de facto standard for PCs. Which brings up to now; Windows 98 Special Edition (perhaps we can have the widescreen Director's cut later in the year!) and Windows 2000/Millennium/Professional (decide on a name already!). Windoze and its bloatware are everywhere and sometimes they work too! (Am I being too harsh here...? Nope!). With memory apparently no object, faster processors and huge hard drives, who cares if the bloatware is too big and memory hungry and needs a 400+ MHz Celeron/P2/P3 to run as fast as Windows 3.11?? Bill and Intel know best. (Bill and Intel's Bogus Adventure....!) Ok, whinge over, back to my story. What has this all to do with Dragons I hear you ask? Well...not much really, except one thing. If you remember trying to squeeze programs in to 1kb then remember what you felt when told that the Dragon had 32kb! Just think how much you did with such relatively small amounts of memory. If we applied the same concise and compact programming techniques, then imagine what we could do with 128Mb! Not to mention the relative speed increase too. Mind you I do like using the PC Dragon emulator and it isn't too bad on speed (runs quickly on a Pentium 1 at 200mhz and a IBM/Cyrix PR166). Despite the PCs apparent domination of the computer market, older computers such as the Dragon still keep going and for us shrinking band of enthusiasts it is still a great machine - I won't be giving my Dragons up for any one. Well that about wraps up my last article for Update. I take my hat off to all the past contributors, editors and to Paul himself for bringing us Update. Paul's dedication, patience and damn hard work for all these years is much appreciated. So 2000 came in with Y2K hype, Millennium Dome, London Eye et al, and will go out without Update. Certainly for me losing Update is a big blow. When I get to the last page of the last Update, I will reach for my tissues and say farewell and thank you. Update RIP - you will be greatly missed.

**Safety On Net (3). Sotos Mandalos**

Now the authentication part of this series of articles. Please do refer to the previous notes for explanations. This item is of course the verification of the identity of the customers and their authorisation to perform certain transactions. However, this is probably the biggest stumbling block to e-commerce. And of course, this problem is confined to (here we go again) lack of standards. For low security purposes such as an initial website, access through an ID and password are sufficient. Perhaps making sure that no-one can see our passwords is everyone's responsibility? We need to treat this as consumers and users of the net just like we do our credit cards.

Think, though, that use of this method, coupled with a lot of personal information, has been widespread. For example, to get onto BTclick, there is only one user ID with no password. However, to claim your free email address, you need to provide all your details, i.e. street number, name, town, etc. So, suppliers believe that although they need information of such kind, the security level offered by user IDs and passwords is inappropriate for e-commerce and when you are providing detailed information for purchases through the net. I am not sure if you are aware, but there is an absolute guarantee for accessing the web: digital certificates. A digital certificate is the electronic equivalent of a driving licence (with a photograph, mind you) or a passport. Such a digital certificate may reside within your internet browser or email software, which would contain personal information to identify the owner. These certificates are issued following a thorough verification process. They are then used to validate the identity of a customer in a whole range of electronic transactions and to encrypt information before messages are sent. In conjunction with smart cards, digital certificates are also being used for low-level business to business identification purposes, such as employee remote network access and website access. A key benefit of digital certificates is that they can also be used to get around the fourth issue we have been talking about and relating to e-commerce security, and that is non-repudiation. Customers cannot deny having made a payment, or instructing a payment to be made. I was reading an article the other day about these things, but according to Gartner, at least 50% of adult European inhabitants will hold at least one electronic certificate by 2004. IDC also forecasts that the market will be worth almost \$2 billion by 2001.

Digital certificates have another important benefit. They provide verification to consumers that a business is authentic. For instance, I mentioned in my first article about [www.amazon.com](http://www.amazon.com). Anyone can set up a website and claim to be the official amazon.com site. How do customers tell an authentic site from a false one? The digital certificate will provide two values to e-commerce customers, and they are: authentication of a website, and a sign of trust over privacy and security issues. There are plans in place that eventually all authorised websites will display an icon which, when clicked on, will reveal a digital certificate and site authentication.

Stronger forms of authentication technology, such as electronic biometrics, are also becoming available. But the use of, say, fingertips, iris patterns, and voice recognition, will be restricted to high security purposes. Again the cost of such devices is not really that great, but we are not there yet.

In summary, the advice from most companies that want to provide services over the net is to stop ignoring security, but not overwhelming it either. On the net, the decision to shop elsewhere is very easy, and clicking a button does it.

\*\*\*\*\*

**I . D . U . G .**

Yes, I KNOW it isn't the old Group, but joining it is still a pretty good way of keeping in touch with what's left of the Dragon scene, and even better, it's FREE!. The place to look is [www.egroups.com/list/dragonuser](http://www.egroups.com/list/dragonuser) so why not give it a try? .... at worst you've only wasted the cost of a quick phone call!. Paul.



**And then there was none...**

It was a shop called Computers For All in Essex which launched the Dragon in my direction: the ZX Spectrum was plagued by delivery delays, so the D32 stepped in as a replacement. From 8-bit, 8 colours, to troubleshooting other people's Windows problems nearly twenty years later - thank you, Dragon Data (or should that be Clive Sinclair?). Those heady days of computers for all - any manufacturer you could think of looked to get in on the home computer boom - went as quickly as they came, as various good ideas amalgamated into a handful of average ones, eventually leading us to where we are now: variations-on-a-theme PCs, which as far as the average user is concerned, brainwash and irritate in roughly equal measure.

In some respects, the Dragon was not entirely different; caught up the marketing thrust which said Home Computers Are The Thing To Have, it attracted its own share of users content to play games (some of them quite good) and not much else. Yet, the chance was there to use the machine to do something you wanted it to. If what you wanted wasn't available, you wrote it. If what you wrote crashed, you fixed it yourself until it worked properly. And, yes, if you have the know-how and the inclination, you can still do that with today's PCs. But the problem is you don't have to; it's probably been written somewhere else, and OK it may not do exactly what you wanted, but it's near enough. We've moved from being Users to Consumers. What this means of course is that the age of computers as interesting tools has been replaced by the age of computers as toys, an age which will find it hard to generate the common interest and, at times, enthusiasm of the Dragon and its fellow 8-bit home computer pioneers. Rose-tinted nostalgia has a tendency to distort, of course; we may not have actually used our Dragons for a few years, but the active lifespan of the Dragon was such that it has continued to generate discussion in the face of the inevitable PC onslaught. And, even without the central focus of Update and NDUG, it may continue to do so. Questions remain unanswered: couldn't "?FC Error - usually parameter out of range, or wrong variable type" have been a bit more vague? Why did the manual insist on telling you to PRINT@128+11 instead of PRINT@139? And did anyone actually solve "Juxtaposition - Barons of Ceti V"? Problems which will no doubt be revisited when the Dragon gets an occasional dusting down and firing up, because rest assured, there are people out there who still hanker occasionally for a session on Dragon Trek. Tens of thousands of Dragons were sold, tens of thousands of users read Dragon User (look closely at the official ABCs, though) and for a while a few thousand or so of them read Dragon Update. When I first climbed aboard in 1988, there was enough material coming in for a monthly publication run, and enough left over to have the next 2 or 3 planned in advance. As Dragon User fell away in 1989, so did the articles and input to Update, and then end of 1990 saw the switch to bi-monthly issues as a reflection of the dwindling numbers of users. Anyone gambling then that there would be another 9 years left in the old beast would have got a very nice price indeed. Was there anything special about the Dragon that made it hold out in the face of inevitable decline? Certainly it was fast, making the most of its 0.9mHz (1.8mHz if you were lucky), and was reasonably well equipped. Did calling it a Dragon imbibe it with just enough dynamism to attract enough users? Or was it simply the divisive nature of the 8-bit computer boom, pitting Spectrum against C64 against BBC model B, which made us want to wring the very last drop out of it? Without the determination of Paul Grade to see things through, the end would have come much sooner. The NDUG's very efficient centralised printing and distribution facilities have ensured that, postal strikes notwithstanding, Update has made it through on time. But that time has finally gone. Thanks from me to Paul for keeping it all together since day one; to Mike Stott for valiantly providing me with a whole page of material each month; and to everybody who has contributed to the newsletter over the years...Update was always what you put into it. Happy Dragoning. Stephen Wood.

**Updated e-Address List**

Alan Greenwood: alan.greenwood@sgcs.co.uk  
 Dave Bateman: dave@bateman.freemove.co.uk  
 Dave Cadman: dave@davecad.freemove.co.uk  
 David Linsley: dlinsley@microsoft.com  
 Duncan Purves: dpurves@yahoo.com  
 Dragon List: dragon-list@grempc.demon.co.uk  
 Gareth Tuttiett: GTuttiett@aol.com  
 Graham Kinns: graham@grempc.demon.co.uk  
 Jon Bird: jon@onasticksoftware.co.uk  
 Keith Nash: k.j.nash@usa.net  
 John Payne: j.f.b.payne@tesco.net  
 Martin Tiller: Em\_and\_M@compuserve.com  
 Paul Burgin: paul@burgins.com  
 Peter Smith: p\_graeme\_smith@compuserve.com  
 Richard Sutcliffe: jrs@sutelec.freemove.co.uk  
 Ken Grade: ken@grade2.freemove.co.uk (or grade2@bigfoot.com)  
 Paul Grade: paul@grade1.freemove.co.uk (or grade1@bigfoot.com)  
 Ray Smith: RAY@smithr.freemove.co.uk  
 Steve Denning: s.denning@cableinet.co.uk  
 Ron Bone: rbone@houdini.cix.co.uk  
 Philip Bass: philb4@tinyonline.co.uk  
 Thane Duffield: thane\_duffield@breathemail.net  
 Tudor Davies: tdavies@lucent.com  
 Spencer Davies: spencer.davies@bt.com  
 Eddie Freeman: eddie@eddiefreeman.freemove.co.uk  
 Tony Drewitt: javelin@javelin-one.netlineuk.net  
 Alan Ford: alan@ford9.freemove.co.uk  
 Bob Hall: bobhen-cantrell.demon.co.uk  
 Sotos Mandalos: user@ast01.pass.theplanet.co.uk  
 Stephen Ross: sross17086@aol.com  
 Bob Schofield: schofiel@xs4all.nl  
 Robert Smith: robert.smith@mitransport.no  
 IDUG (E-Group): dragonuser@egroups.com  
 Marcus Ambler: marcus\_ambler@yahoo.co.uk  
 Keith Copland: keith.copland@gecm.com  
 John Mitchell: mitchell@cilfan.new.labour.org.uk  
 John Oakley: joakj@globalnet.co.uk  
 Stuart Parnell: powertec@totalise.co.uk  
 Geoff Thomas: geoffreythomas@cwcom.net  
 Carl Stockdale: carlton.stockdale@talk21.com

\*\*\*\*\*

**SOLUTION TO CROSSWORD NO. 4**

ACROSS		DOWN	
1,10dn	GREAT EXPECTATIONS	1	GATECRASH
8	OLIVE BRANCH	2	EXPLAIN
9	TOPIC	3,14ac	TO CUT A LONG STORY SHORT
10	EXCRETE	4	LITTLE DORRIT
11	COASTAL	5	TRICKY SITUATION
12	EMPTY	6	INFERNO
13	ANNELID	7	SHRED
14	see 3 dn	10	see 1ac
16	HERON	15	TACHYLYTE
18	TITANIC	17	ROWBOAT
20	GARDA	19	NO RULES
22	TEATRAY	21	PHI AL
23	HABITAT		
24	INLAY		
25	ANAGRAM INFO		
26	NISSE		

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

Err yes, I WAS going to launch into the traditional name-check sign-off routine, but once I started making a list it soon became obvious that I'd need another issue to get them all in, so can we settle for something a little more general?. Firstly, the "staff", past and present ... Editors and Software Editors. Why any of them ever put up with the job I can't imagine ... trying to find enough material for us to make up ONE reasonably interesting issue is bad enough, but to have to do it for YEARS probably counts as "cruel and unusual punishment!". Then of course there's the people who wrote software for us ... and damned good stuff it was too, and it not only helped a lot of Dragon owners but in doing so provided an essential boost to Group income. Of course, there could have been no Updates without our contributors ... you MUST have done a good job or no-one would have stayed on all this time! ... after all, it was YOUR material they were reading!. And finally I have to include what the political types love to refer to as "The Silent Majority", those of you who paid up your subscription and took a chance, and then kept on doing so year after year, in many cases continuing to do so long after your Dragons had taken a one way trip to the car boot sale or the attic!. What can I say but thanks to all of you?... I started the old Group virtually by accident, and you managed to turn it into one of the longest running "single make" groups ever ... and in its day one of the biggest!. You made a good job of it, and proved all the "experts" wrong, and in doing so kept one of the best home computers ever built going years after later ones were deader than dinosaurs!. Well, I hope you're all very proud of what you achieved ... you damned well ought to be!. In the beginning hardly any of us knew anything at all about Dragons, or about any other computer for that matter ... and now more than a few are earning a good living from being "computer experts" of one variety or another .... wonder how many of those who started off with an Atari 400 or a Vic 20 can make the same claim?. The old Dragon always had one great advantage over the rest ... it was a true "educational computer", in that it was capable of so much that it almost begged people to learn how to make full use of it ... and a lot of you did!. It was (and still is!) a damned good teacher.

Well, it was fun while it lasted ... which is more that anyone can say for the PC scene .... that's just a dreary round of expensive gimmicks masquerading as "improvements", bug ridden GUIs being passed off as Operating Systems, and grotty commercial software that costs a fortune and is definitely written(?) on the basis of "never mind the quality, look at the size!". As to learning anything ... you have to be joking!, and what sort of machine is it that can't even run a printer unless it has the World's Worst GUI installed?!. (For that matter, what sort of printer is it that can't work without the same grotty GUI either?!). And you need to go on a course to learn to operate a W/P application?!. In the days when the Dragon first appeared garbage like that would have been laughed out of production! ... everyone would have thought it was intended as a rather bad practical joke!. So OK, that's progress for you ... so they tell me, can't say I'm convinced though, can you?.

Well, I hope the old Group managed to serve its purpose ... we've bored people, irritated them, occasionally insulted them, and possibly managed to help one or two ... and the latter was really the original object of the exercise. It would be nice to think we succeeded in that. The idea of a group where those who discovered something interesting about their machine or developed something useful to add to it, passed on the information to others, rather trying to sell it on at a profit was rather disapproved of in certain circles, and I used to get quite a lot of mail suggesting that I should adopt a more "commercial attitude" ... well, maybe I should have, but then the NDUG would have turned into a very different beast, and I'm not at all sure I would have liked running it. We made enough to pay our way, and that was all I ever expected to do. Seemed like a good idea at the time ... and it still does.

So, Here Endeth the Group!. Have fun, and don't consign your Dragon to the bin, it CAN work without Update!!. Keep in touch ... the Group may have closed down, but I haven't!, and I'd still very much like to hear from you. Paul Grade.



# **THE ADVERTISING PAGES**

\*\*\*\*\*

## **UP-2-DATE COMPILATION DISCS**

THE UP-2-DATE COMPILATION WILL REMAIN AVAILABLE!. DISC 1: MAINLY DUMPS FOR EPSON PRINTERS AND INCLUDES THE ABILITY TO PROCESS COMPRESSED GRAPHICS. DISC 2: COLLECTION OF UP-2-DATE "SHOWCASE" PROGRAMS. DISC 3: COLLECTION OF GRAPHICS PROGRAMS, MANIPULATORS, EDITORS, CREATORS, ETC. DISC 4: HUGE COLLECTION OF COMPRESSED GRAPHICS, PLUS "PAKKER" PROGRAM FOR COMP./DECOMPRESSING. **PRICE IS £3.50 INCLUSIVE PER DISC, FULL SET OF FOUR FOR JUST £12.00.** AVAILABLE FROM RAY SMITH, 5, GLEN ROAD, PARKSTONE, POOLE, DORSET. **CHEQUES PAYABLE TO RAY SMITH.**

\*\*\*\*\*

## **THE DRAGON PD LIBRARY STILL OPEN!**

A FULL LIST OF AVAILABLE SOFTWARE CAN NOW BE OBTAINED FROM THE PD LIBRARY.

NEW LIST NOW AVAILABLE. AN S.A.E WOULD BE MUCH APPRECIATED.

ALL ORDERS AND ENQUIRIES TO: KEITH NASH, 16 LANSDOWNE STREET, WORCESTER WR1-1QD. YOU WANTED IT, SO MAKE USE OF IT!.

\*\*\*\*\*

## **D64 MEECE DRIVERS STILL AVAILABLE!**

D64 MOUSE DRIVER SOFTWARE, ALL YOU NEED TO RUN A STOCK PC TYPE MOUSE WITH YOUR D64 ON ONE 5.25" DISC FOR JUST £3.00 INCLUSIVE. IT JUST HAS TO BE A BARGAIN! **CHEQUES PAYABLE TO PAUL GRADE, 6, NAVARINO ROAD, WORTHING. BN11-2NF. PLEASE.**

DRAGON 64 SERIAL PORT TO 9 PIN "D" SERIAL MOUSE PLUG ADAPTOR LEAD, READY MADE AND READY TO USE. WILL STILL BE AVAILABLE FROM STEWART ORCHARD FOR ONLY £3.00 INC.

**CHEQUES PAYABLE TO STEWART ORCHARD, PLEASE, TO STEWART AT 4 EASTERN CLOSE, CAISTER-ON-SEA, Gt. YARMOUTH, NORFOLK. NR30-5HT.**

\*\*\*\*\*

## **SOFTWARE SALE WILL CONTINUE!!**

EX-P.S.E SOFTWARE STOCK FOR SALE, AT LOWEST EVER PRICES!. NOW IS YOUR CHANCE!. BUY NOW WHILE STOCKS LAST!. FAR TOO MANY TITLES TO LIST HERE, SO SEND ME A S.A.E FOR FULL LIST. SOME HARDWARE BITS AND PIECES ALSO AVAILABLE. **TIM LEES. 83 HARWOOD VALE, HARWOOD, BOLTON, LANCs. BL2-3QX.**

\*\*\*\*\*

## **MILLENNIUM CLEARANCE!!**

DRAGON 64, DRAGON 32, TWIN DRAGON DATA DRIVES AND DOS CARTRIDGE, SPARE D64 KEYBOARD, GREENSCREEN MONITOR, CASSETTE UNIT, LEADS, DOZENS OF DISCS AND TAPES (MOSTLY ORIGINALS) INCLUDING OS9 ETC, BOOKS, MANUALS, AND LOADS OF OTHER BITS AND PIECES TOO MUCH TO MENTION. MUST SELL AS ONE LOT.

THE ABSOLUTE BARGAIN OF THE CENTURY AT ONLY £50.

BUYER **MUST** COLLECT OR ARRANGE COLLECTION.

PHONE Mrs. LANGSTON ON BRIGHTON (01273)-775761 after 6 p.m ONLY, please.

\*\*\*\*\*

## **STILL MORE BARGAINS!**

D64 WITH INTERNAL DOS BOARD £25.00, DUAL 5.25 DISC DRIVES IN HOUSING £10.00, DRAGON DOS, DOSPLUS, & FORTH £10.00, D32, PLUS NON-RUNNER FOR SPARES £10.00, CASSETTE RECORDER £5.00, GREENSCREEN MONITOR (ex-Reuters) OFFERS?, BOX OF GAMES TAPES £5.00, Appx.30 ASSORTED FLOPPIES £10.00, ABOUT 6 DRAGON BOOKS (INC. INSIDE THE DRAGON) £10.00, UPDATES FROM ISSUE 2 TO 103, AND STACKS OF RAINBOW & DRAGON USER MAGS ... OFFERS?. OR £60 FOR THE LOT, BUYER COLLECTS OR PAYS CARRIAGE.

CONTACT KEITH COPLAND (keith.copland@gecm.com) on 01634-302643.

\*\*\*\*\*

**THIS IS THE FINAL UPDATE, BUT AS YOU CAN SEE, A LOT OF ITEMS WILL STILL REMAIN AVAILABLE, SO PLEASE MAKE A NOTE OF ALL THE RELEVANT DETAILS NOW.**

\*\*\*\*\*

**FINAL PRICES! .**

DRAGON 64 MOUSE DRIVER DISC ..	£2.00	DRAGON 32 & 64 CIRCUIT SHEETS	£1.00
EZEE ADVENTURE WRITER UTILITY.	£2.00	DRAGON/COCO/CUMANA DOS SHEETS	£0.75
EZEE M/C TUTORIAL DISCS (2).ech.	£2.00	D32 TO 64k UPGRADE MANUAL ...	£1.50
R.A.D BEST OF INPUT LISTINGS .	£2.00	RAMDISK EXTRA .....	£2.00
DISC EDITOR UTILITY .....	£2.00	TETRIS.(PAYNEFORTH VERSION)..	£2.00
DRAGON/COCO DISC CONVERTER ...	£2.00	PC/DRAGON EMULATORS WITH DISC	
COCO/DRAGON DISC CONVERTER ...	£2.00	UPGRADE .....	£2.00
DRAWEZEE GRAPHICS UTILITY ....	£2.00	DISC UTILITIES COLLECTION ...	£2.00
ROTABB .....	£2.00	PAYNE FORTH & ASSEMBLER .....	£3.50
BALLDOZER .....	£2.00	AMATEUR RADIO UTILITIES DISCS	£3.00

ORDERS AND PAYMENT FOR ALL THE ABOVE TO PAUL GRADE. 6 NAVARINO ROAD. WORTHING.  
SUSSEX.BN11-2NF. CHEQUES PAYABLE TO PAUL GRADE, PLEASE.

**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 RAY SMITH. 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.

**D.T.P. FOR THE DRAGON**

THE NDUG 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 RAY SMITH FOR FULL DETAILS AND VERSIONS AVAILABLE.

CHEQUES FOR ALL IN THIS SECTION PAYABLE TO RAY SMITH, PLEASE.

**UPDATE BACK ISSUE REPRINTS**

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

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

**IMPORTANT! . MAKE A NOTE OF IT!!**

ALL OF THE ITEMS LISTED ABOVE ON THIS PAGE WILL CONTINUE TO BE AVAILABLE FROM THE PERSONS NAMED. HOWEVER, CHEQUES MUST NOW BE MADE PAYABLE TO THE RELEVANT INDIVIDUALS, AS THE GROUP ACCOUNT WILL BE CLOSED.

**WANTED!**

CASSETTE SOFTWARE WANTED!. BUZZARD BAIT, JET SET WILLY, DOWNLAND, CASHMAN, CUTHBERT IN SPACE/JUNGLE/MINES, AND ALMOST ALL DRAGON SOFTWARE AND HARDWARE. DETAILS PLEASE TO: I.REHMAN. 128 CARR ROAD, NELSON, LANCASHIRE.BB9-7ST.

**FREE!!**

48 DRAGON USER MAGS, 26 POPULAR COMPUTING MAGS, DRAGON TRAINER, LOAD & GO, INSIDE THE DRAGON, THE WORKING DRAGON, PLUS VARIOUS OTHERS. ALSO 4 DRAGONS AND 1 PSU. ALL FREE TO COLLECTOR!. PLEASE PHONE JOHN COWIE on: 01442-256840. (Hemel Hempstead).

**FOR SALE .**

DRAGON 64 WITH PLUS BOARD, DRAGON DATA TWIN 5.25 DRIVES, WESSEX MICRO EXPANSION UNIT, 1 SET OF FLEX O/S DISCS, EPSON FX100 PRINTER, ACORN JP101 PRINTER, MONITOR, LEADS, DISCS, TAPES, BOOKS, etc. UPDATES ISSUE 5 TO PRESENT DATE.

£50.00 THE LOT, PLUS CARRIAGE!.

CONTACT JOHN OAKLEY (joakj@globalnet.co.uk), at 9, St.Johns Road,Clevedon,BS21-7TG