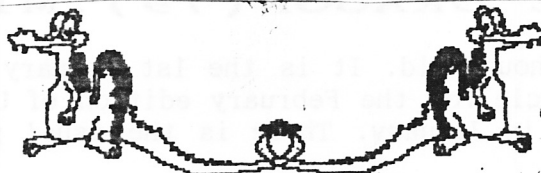


The Newsletter of the National Dragon User's Group

DRAGON



UPDATE

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ISSUE 123 YET ANOTHER YEAR OF UPDATE?! FEBRUARY 1999

THE GAFFER'S BIT

You've had at least a month to recover from hangovers/indigestion/flu/etc, so what happened to all that material you were going to write for us?. You forgot? ... then consider yourself reminded and get writing, while there's still an Update to write for!. Yes, I know you've heard it all before, but you've only yourselves to blame for the repetition if we'd received the material there would be no necessity for repeating the old, old theme yet again.

Anyway, welcome to 1999, the year when everything will be perfect, and there will be peace and prosperity everywhere, politicians will scrap inane and insane laws instead of adding to them, and become totally honest in all respects, Clinton will join a monastery, the computer industry will admit that they have been conning us into buying a load of old rubbish at inflated prices for years, software companies will actually test their products before releasing them, magazine cover discs will contain only useful software instead of time trapped "drop dead in 30 days" demos, and the Treasury will abolish VAT, Excise Duty, and vehicle tax. This will probably happen at the same time that TV companies decide to pay us for watching their grotty broadcasts instead of demanding money from us!. Of course, if you believe any of this you should at least go and say goodbye to the fairies at the bottom of your garden before you lose your job as a thickness gauge at the short plank factory, and the white coat brigade arrives to take you away, because unfortunately 1999 so far looks like being a re-run of 1998, only more so!. Oh well, what did you expect anyway?. Improvements?!. Well, I suppose we can't really expect anything much to happen on the Dragon scene these days, despite Stewart Orchard's efforts to come up with useful bits and pieces, and I don't feel like writing about PCs just now, so I'll leave you to get on with the more interesting stuff ... what there is of it this month!. PG

Year 2000 Compliant ?

No, not the dreaded bug (more of that inside), but the rather more crucial point that unless we receive some more article before the beginning of March, then 1999 will be that last year for Update and we most certainly will NOT be Year 2000 compliant, as we won't even be here!

At present, the next issue consists of just pages 2, 3, and 4, so barring a rush of submissions the remaining pages will be "goodbye and thank" you pieces from all of us at Update Towers.

Yes, I KNOW I've said it before x number of times, but it is true. We may be simpletons, but we work on the premise that Update exists due to the members' input, so the logical extension of this is that if there is no input, there is no Update. And maybe, in our fifteenth year (15! Count them!), that's not such a bad thing. End of millennium and all that, perhaps end of Update will fit in with that quite nicely.

Prove me wrong and send us something; or join us in April for the goodbye roll-call. SW.

PEEKING THE DRAGON (79) . MIKE STOTT

Panic has hit the Stott household. It is the 1st January and I have only just started writing this article for the February edition of Update and it needs to be in by the first week in January. There is the usual problem of what I can write about.

Yes, I know that I promised to do a review of UP2DATE but unfortunately I have not even had time to look at the last few issues and I do not want to tell you about what was in it several issues ago so that will have to wait until a later date. Will I have even worse problems next year with the so-called Millennium Bug or will the world have come to an end when the clocks strike midnight?

Does anyone still have clocks that strike out the hours?. At work I appear to be the only one showing any concern about the date problem. I keep getting told "We will have all year 2000 compliant computers by then". But there are so many other things. Will we be able to fuel our buses?. Probably, but the date will be haywire so the monitoring system will not work correctly. Still the system has been in place since 1986 so this will still have to be replaced. The old telephone system will work according to BT so this will stay as it is sufficient for our needs. Most of the software I use in work is Dos based so this has had to be looked at carefully. I know my old spreadsheet software works as I have to produce cashflows for two years in advance so I have been forecasting profits for the year 2000 for many months already. Is the government helping?. Well there is ACTION2000 but so far I have not been helped much. After four telephone calls I finally got my pack sent out to the company but I am still waiting to hear about the free training that is available and that finishes next month.

This brings me on to one of my pet subjects. Why is it called the Millennium Bug? A millennium is one thousand years and the first year was one (not zero). This means that the first millennium was year one to year one thousand. The second millennium is year one thousand and one to year two thousand. The next millennium does not start until the first of January two thousand and one so why is everybody planning to celebrate twelve months too early. If we look at the scientific evidence that has been presented lately we should really have celebrated the millennium in 1996 if we base the years on the birth of Christ.

Anyway I will drop this as I do not want to get involved in a religious argument. My Dragon is the only god in this house anyway as it is revered above all (and will have no problems with the year 2000 bug).

What happened to the extra second we were supposed to get at midnight on New Year's Eve?. I put the teletext clock on the corner of my TV screen just before midnight expecting it to stay at 00.00.00 for an extra second and it did not.

Have I been robbed of a second of my life by some Whitehall bureaucrat or was it a BBC plot to use all our extra seconds for extra life for their bosses?. Did they sneak the extra second in later after I had gone to bed or what?

In my last article I asked for help concerning The Scott Adams and Mysterious Adventures. Presumably you all left it to each other to provide me with the answers as nobody has been in touch with me yet. There must be at least one of the old adventure freaks still left in the group apart from Tim Lees so why haven't you come up with the answers yet?. Has nobody got SPIDERMAN?. I am beginning to worry that many of the old software titles are going to be lost forever to the Dragon as people dispose of their old systems. Some ex-Dragon owners have passed their software collections on in the past and I have acquired many titles myself by these means. Unfortunately I have not kept my handwritten list up to date as I have added to the titles. The software is scattered now through various rooms in the house and my New Year's resolution is to gather everything together and compile a list on computer of everything that I own.

While I am doing that I will also get out my old folders with various Dragon related subjects and sort them out. If I find any titles of software that I do not own I will probably be asking if anybody has got it that no longer wants it so that I can build up my collection. I would like to own everything that was ever released but this is obviously impossible. M.S.

The Millennium Bug..Clive Scott

A comment by Paul Grade in Update 122 gave me the idea for this article - the millennium bug, year 2000 compatibility. It has attracted a lot of media hype and scare mongering in the press. Whilst I am not an expert on the subject, I have read a lot about it, mainly in the computer press.

The Millennium Bug is caused by the way computers store data. When computers were first developed, memory (RAM) and offline storage (floppy and hard discs) were both very expensive and had a low capacity. Therefore, both were in short supply. In order to save space only the last two digits of the year were stored i.e. 1999 as 99. This is fine until you get to the year 2000, when it will be recorded as 00. Most computers are designed to treat 00 as 1900 and this is where the problems begin.

PCs have an onboard RTC (real time clock) powered by a battery. When a computer first boots up the BIOS (basic input/output system), whose job it is to perform test routines and load the operating system, reads the time off of the RTC. This is then used by the operating system. Unlike the Dragon, the date and time is stored with the filename in the disk directory when you save a file to disk. The operating system will regard 1/1/1900 as an invalid date and in most cases will default to the date of 4/1/1980. Some computers do not treat the year 2000 as a leap year and therefore there will be no February 29th and they will be a day out from then onwards until manually corrected.

There are a number of programs around that will check the computer's BIOS and operating system and if they fail any of the tests will load a small TSR (terminate and stay resident) program which will correct the dates on the rollover to the year 2000. This problem is not confined to old computers; I have tested all the PCs at work and all the machines with processors prior to the Pentium MMX failed at least one test. In addition, all Microsoft operating systems up to Windows 95 have year 2000 problems and patches must be downloaded off of their website.

However, a more major problem is the programs that have been written to run on the computers. Many of the programs still in use today were originally written as much as 20-30 years ago. This is especially true of mainframe computers. These are often bespoke programs and the companies and programmers who wrote them are long gone. There is no quick way to trawl through a program, possibly 100,000+ lines long, to look for and correct references and storage of dates. The Financial Services sector, for which I used to work, is spending billions in correcting their software. An insurance company, for instance, would be liable if your insurance policy was cancelled because the program thought that it was 91 years out of date. I wrote a payroll program for a club for which I am the Treasurer, and over the next year I will have to check about 2000 lines of code to make it year 2000 compliant.

It will be necessary to change all the dates used in the program and stored in data files to the full four digits, or use a system of windowing i.e. still use two digits but treat, for instance, all years between 30 and 99 as the twentieth century and all year between 00 and 29 as the twenty first. This at least will give some breathing space for the programs to be eventually replaced with fully year 2000 compliant ones.

In extreme cases the program could crash completely, and bring down the entire computer system of the company. Companies could lose a considerable amount of money and may even go broke. Small companies do not have the expertise or the resources to perform many of the checks and updates required. A number of organisations, especially local councils and health authorities, are insisting that they will only deal with companies who have proved that they have taken all prudent steps to ensure that they are year 2000 compliant, and they will make them liable for any losses if they are not. What of third world countries with even fewer resources?

Our troubles are confined to computers. Many pieces of equipment have processors in them which need to be checked for year 2000 compliance e.g. heating, alarm, and

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telephone systems, video recorders and apparently even microwaves! Where does this leave Dragon owners? Luckily Dragons don't have built in clocks and DragonDOS does not store dates so we are immune to the normal problems. I have no experience of Flex and OS9 so cannot comment on those. However, any programs that have been written which use dates in their execution could have problems e.g. spreadsheets, accounts, diary programs, etc. If they exist on ROM cartridges like my EliteCalc spreadsheet there is no way to amend them and you will have to live with errors caused or stop using the program. If they exist on tape or disk, it will probably be up to you to correct them.

I am dubious about the stories of a possible financial crisis or planes dropping out of the skies on the 1st January 2000, but I for one will not be flying over that new year just in case. If you are still worried you can get more information from Action 2000 on 0845 601 2000 or www.open.gov.uk/bug2000.htm

**As an aside, the story "Ghost From The Grand Banks" by Arthur C Clarke revolves around some people using the vast amounts of cash they earned by solving the Y2K problem to raise the Titanic - topical, huh? And written in 1990, no less. And I seem to remember, at some Dragon show from the past, that the Siegfried Computer Gruppe (I think) had a Dragon with a PC keyboard and an RTC installed - what price 'progress'?

Flying on New Year's Eve? Me neither - have you SEEN the prices??...SW**

Female Computers? ... Tim Lees

In December's Update, Clive Scott wondered what computers would be like if women were the dominant gender in the computer world. A few ideas sprung immediately to mind.

Instead of plastic covers, computers and monitors would have nicely coloured knitted ones.

Error messages would be two pages long as the computer told you exactly what was wrong, how it remembers a similar incident last week, what you were wearing at the time, and what the weather was like.

If you make a mistake while programming, the computer will remind you of it six months later.

Once a month the computer would stop in the middle of a game and complain that it is doing all the work while you just sit on your bum having fun.

Every once in a while when you switch on the computer it would flash up a message saying it's not in the mood today and switch itself off again.

Many more suggestions come to mind, but that will do for now. Sexist? Maybe, but who gives a damn?

Silly question, perhaps ...

But Tim's mention of error messages reminded me ... does ANYONE have a COMPLETE list of the error codes generated by assorted Win versions?. Once upon a time things were simple, all IBM type machines used to use the same error codes, even the same "beep codes", and if you hadn't learned them the hard way IBM were willing (if not exactly happy) to supply a detailed list, and MS-DOS error messages were simple and explicit, but now? all you get are cryptic messages that "something.odd has generated a General Protection Fault", or "Error C000XD/3 has occurred, do you wish to cancel or ignore" Wonderful!!, so informative, so useful, so irritating, so downright bloody stupid!. Sure, my hardware still responds with the old "IBM" type codes, but trying to pick the bugs out of assorted Windows software installations is a good way of qualifying yourself for a stay in one of those places with nicely padded walls, especially if you happen to be working with Win95/98 material!.

Paul Grade.

DLOAD Explained... Stewart Orchard

Lurking in the Dragon's ROM there is an obscure and little understood command - DLOAD. So little understood, in fact, that nobody seems to realise that it doesn't work! I would like to meet these people who can write software without have to test it; cue PG comment. Anyway, before you start thinking that good paper is being wasted here, the bug is fairly easily fixed and I can confirm that DLOAD is too useful to be ignored.

What's it for? Simply put, DLOAD can download ASCII program files over a serial link from another computer - the 'server'. The binary version, DLOADM, does the same with multiple machine code blocks.

There are two ways to fix the bug, depending on whether you wish to use your disc drives or not:

1 - unplug the disc cartridge and switch on the Dragon 64. Type EXEC to get it into 48K BASIC and POKE the locations &HE13D, &HE16E and &HE1AB with the value &H21.

2 - With discs, run a MAP1 ROM copy utility and poke the locations &HA13, &HA16E and &HA1AB with the value &H21.

Now, as the transfer protocols are not trivial, special software will have to be written for the server. I will, however, attempt to explain the format required. Immediately after DLOAD"FILENAME" has been typed, the Dragon will send the byte \$8A. The server must echo this back. The Dragon will then send the 8 filename characters followed by a 1 byte XOR checksum. Filenames are padded to 8 characters with spaces. The server must then send \$C8 to indicate successful reception. The file should now be located and a decision made as to whether it is binary, ASCII, or non-existent. A file type byte, and ASCII flag byte, and an XOR checksum byte should be sent to the Dragon.

FILE TYPE	file type byte	ASCII flag byte	XOR check byte
ASCII (DLOAD)	\$00	\$FF	\$FF
binary (DLOADM)	\$02	\$00	\$02
non-existent	\$FF	\$00	\$FF

If the server sends the error codes for a non-existent file, the Dragon will quit with ?NE ERROR. N.B. this error is undocumented and has the code \$34, distinct from the DOS error with code \$A0. Also, if the Dragon detects a checksum failure or the server deviates from the plot, it will start from the beginning again and send \$8A. After the fifth retry, the Dragon will send \$BC and quit with ?IO ERROR.

Now, a series of block requests will be made, each one starting with the Dragon sending the byte \$97. This byte must be echoed back. The Dragon will now send two block number bytes followed by an XOR check byte. The block number is constructed by multiplying the first byte by 128 and adding the second byte. This number starts at 0 for the first block and increments by 1 for each subsequent block. If the server is happy with the block number, it should send \$C8. Now for the actual data. A length byte should be sent, then 128 data bytes followed by an XOR check byte calculated on the previous 129 bytes. The length byte can range from 0 to 128 and tells the Dragon how much of the block is real data. If the length is 0, this will mark the end of the file and the Dragon will request no more data blocks, although 128 useless data bytes will still have to be sent as part of the EOF block.

If there was a problem during the block, the Dragon will send \$97 and retry with the same block number. Again, after the fifth retry, \$BC will be sent and ?IO ERROR shown. After receipt of the first block, the Dragon will decide if the file type bytes are compatible with the command used, ie DLOAD or DLOADM. A problem here will result in ?FM ERROR.

ASCII data is simple and consists of a text file containing program lines as you would type them. Binary data is rather more complicated, and will be the subject of my next article.

Win 3x Prog.Manager Security. G.Tuttiatt

Previously, I promised a simple security system based on adding restrictions to your PROGMAN.INI file, using some other tricks of Windows 3.x plus a couple of batch files. To recap, the standard installation of Windows 3.x allows all icons to be deleted, moved and changed by accident. Also, you can't limit access to applications, unless it allows passwords. But it is possible to control what Program Groups are shown in the Program Manager window, and thereby limit access to applications. This system works by having two versions of the PROGMAN.INI file, where one is the original and the other is a restricted version. It also allows the use of different setups for different users. The idea is to swap these version around so as to turn the restrictions on or off, but remember to keep a backup copy of your Windows INI files just in case. Two batch files, living in the C root directory, allow the restrictions to be enabled or disabled from DOS. The two files are named PM ON.BAT (restrictions off, Program Manager 'on') and PM OFF.BAT (restrictions on) - or any name you want. They are shown below and are self-explanatory. [brackets] indicate notes for information and not part of the batch file.

```
PM ON.BAT
@echo off                                [turns echo off]
cls                                       [clear screen]
echo Copy original restriction-free version of PROGMAN.INI
echo to over-write the restricted version
echo Disable restrictions GJ Tuttiatt 17/10/95
c:                                       [ensure logged on to c: drive]
cd\                                     [ensure at root directory of c: drive]
cd windows                             [change to Windows sub-directory]
attrib progman.ini -r                  [reset file to read/write]
copy progman.ba1 progman.ini /v        [set PROGMAN.INI to original]
cd\                                     [return to root directory of c: drive]
echo Now run Windows
rem win                                [remove 'rem' to run Windows automatically]
```

```
PM OFF.BAT
@echo off
cls
echo Copy restricted version of PROGMAN.INI
echo to overwrite the restriction-free version
echo Enable restrictions GJ Tuttiatt 17/10/95
c:
cd\
cd windows
attrib progman.ini -r
copy progman.ba2 progman.ini /v        [set PROGMAN.INI to restricted]
attrib progman.ini +r                  [reset file to read only]
cd\
echo Now run Windows
rem win
```

The syntax for use is c:\pm on [enter] for Program Manager on, restrictions off, or c:\pm off [enter] for Program Manager off, restrictions on. Remember that you must restart Windows to implement any changes to PROGMAN.INI. One final note: with the PROGMAN.INI file read only, a message will appear when entering Windows saying that the file is read only and that changes cannot be saved. Simply click on the YES button or hit the [enter] key. Windows will then continue loading. On my system, I've compiled the two batch files in to .COM executables using BAT2EXEC Compiler 1.5 by Douglas Boling and set them read-only and hidden. I find this security method very useful when many people use a PC.

Back to Basics?

The following listing is a neat little program written by Dave Bateman to help kids (he intended it for the 9/8 year range but it could easily be adapted for older children) learn their tables. It works well, and although it is written using GWBASIC it would be an exceptionally simple job to modify it for the Dragon, so whichever machine you are using at the moment, why not type it in and give it a try?.

```

0 DATA 2,9,6,1,11,4,12,7,3,10,8,5
1 DIM H(12)
2 FOR C= 1 TO 12:READ H(C):NEXT
3 KEY OFF:DEF SEG=0:PQ=PEEK(1047):IF(PQ AND 32)=0 THEN POKE 1047,PQ OR 32
4 GOTO 8
5   CLS:COLOR 6:H$="Is      ":J$="      still      playing      press      Y/N":LOCATE
10,41-(LEN(J$)+LEN(H$)+LEN(N$))/2:PRINT H$;N$;J$
6 Z$=INKEY$:IF Z$="" THEN 6
7 IF Z$><"n" AND Z$<<"N" THEN 10
8 CLS:COLOR 6:LOCATE 10,13:PRINT"Please type in your name and then press enter"
9 LOCATE 12,13:INPUT N$
10 CLS:LOCATE 10,24:PRINT"Which Times Table Are You Learning Today"
11 LOCATE 12,25:PRINT"Type In The Number And Press Enter"
12 LOCATE 16,40:INPUT A
13 CLS:PRINT:PRINT: PRINT:PRINT"If you would like to be tested on a selection
upto the 12 times table [PRESS 1]"
14 PRINT: PRINT: PRINT:PRINT" If you would like to be tested on only
the";A;"times table then [PRESS 2]"
15 II$=INKEY$:IF II$="" THEN 15
16 IF II$="1" OR II$="2" THEN 17 ELSE 13
17 CLS:SCREEN 1: SCREEN 0:CLS:P=0
18 PRINT:PRINT: PRINT" Would you like to see any times tables          before
you start?":PRINT:PRINT:PRINT:PRINT"          press Y or N"
19 Z$=INKEY$:IF Z$="" THEN 19
20 IF Z$="y" OR Z$="Y" THEN GOSUB 47
21 FOR Q=1 TO 12
22 CLS:RANDOMIZE TIMER:LOCATE 2,15:COLOR 3:PRINT "QUESTION ";Q
23 IF II$="1" THEN V=INT(RND*12)+1 ELSE V=H(Q)
24 IF II$="1" THEN Y=H(Q) ELSE Y=A
25 RANDOMIZE TIMER
26 GOSUB 42
27 NEXT Q
28 SCREEN 0:WIDTH 80:COLOR 2:CLS:LOCATE 10,41-(15+LEN (N$))/2:PRINT"you
got";P;"right";" ";N$
29 IF P<7 THEN MARK$="Try harder next time"
30 IF P=7 OR P=8 THEN MARK$="Quite Good"
31 IF P=9 OR P=10 THEN MARK$="Good"
32 IF P=11 THEN MARK$="Very Good"
33 IF P=12 THEN MARK$="EXCELLENT !!"
34 LOCATE 12,41-LEN(MARK$)/2:PRINT MARK$
35 A$="Would you like another turn? PRESS Y/N":LOCATE 15,41-LEN(A$)/2:PRINT A$
36 W$=INKEY$:IF W$="" THEN 36
37 IF W$><"y" AND W$<<"Y" THEN 38 ELSE 5
38 CLS:SYSTEM'j.d.b. 2/11./98
39 SOUND 40,9:LOCATE 12,13:COLOR 7:PRINT V;" x ";Y;" = ";V*Y:L$="press any key to
continue":LOCATE 15,34-LEN(L$):PRINT L$
40 W$=INKEY$:IF W$="" THEN 40
41 RETURN
42 LOCATE 10,13:COLOR Q:PRINT V;" ";:COLOR 7:PRINT"x";:PRINT" ";:COLOR Q:PRINT

```



```

Y;:COLOR 7:PRINT" = ";:COLOR 4
43 INPUT;" ",D
44 IF D=V*Y THEN PLAY "cde" ELSE GOSUB 39
45 IF D=V*Y THEN P=P+1
46 RETURN
47 CLS:PRINT:PRINT:PRINT:PRINT"Which Times Table Would You Like To See"
48 LOCATE 9,4:PRINT "TYPE IN THE NUMBER AND PRESS ENTER"
49 LOCATE 12,15:PRINT"I WON'T ACCEPT NUMBERS OVER 80 TRY ME"
50 LOCATE 16,18:INPUT TT
51 IF TT>80 THEN 47
52 CLS:LOCATE 3,14:PRINT TT;"TIMES TABLE"
53 FOR F=1 TO 12
54 LOCATE F+7,14
55 IF F<10 AND F*TT<10 THEN PRINT " ";F;"x";TT;"=";" ";F*TT
56 IF F<10 AND F*TT>9 AND F*TT<100 THEN PRINT " ";F;"x";TT;"=";" ";F*TT
57 IF F>9 AND F*TT>99 THEN PRINT F;"x";TT;"=";F*TT
58 IF F>9 AND F*TT>9 AND F*TT<100 THEN PRINT F;"x";TT;"=";" ";F*TT
59 IF F<10 AND F*TT>99 THEN PRINT " ";F;"x";TT;"=";F*TT
60 NEXT F
61 PRINT:PRINT:PRINT:PRINT"Would you like to see another press Y/N"
62 B$=INKEY$:IF B$="" THEN 62
63 IF B$="y" OR B$="Y" THEN 47 ELSE RETURN

```

This should have been

a piece on the relative virtues or otherwise of the assorted "free" ISP firms that are springing up all over the place, or at least that was the intention, but illness prevented me from doing the necessary checking, so instead it looks like turning into a general request for relevant information on any of the assorted "FreebieNet" servers you may know about. All and any details would be very much appreciated. My original idea was to see how many (if any!) were willing to provide software for use with Win 3.x as well as or even instead of the more common 95/98/NT varieties, but to date I've only managed to get an answer on that point from two ... the others I tried pointedly ignore the question or tell me that all I need to do is get a faster machine and switch to 95! and seem quite shocked when I point out that this is a 48 meg AMD running at circa 300 mh, but running 3.11 simply because I dislike bug-ridden and totally unstable GUIs!. Yes, I know that it is quite possible to install something like IE4.01 or 3.03 (Win3.x versions) and work virtually any ISP from that, although it isn't QUITE as simple as it sounds ... for example, if you do that with 4.01 and use the Freeserve "signup" procedure, IE then thinks this is the default setting and gets most confused when you try to convince it otherwise ... far better to set up your account on a machine running under 95/98 and simply type your account details in on the 3.11 system afterwards it saves a lot of confusion and work, as I discovered the hard way!. However, that isn't the point, why should all the "freebies" insist that you have to use 95 when the "expensive" ISPs are still more than happy to supply their software in 3.x or in some cases even DOS versions?!. Also, it appears that the actual services offered by some of the freebies are less than comprehensive, and in some cases a lot of the features people expect turn out to be rather expensive "extras" still more seem to be using ultra-expensive dial-up numbers, but you'll only discover this if you read their advertising using a microscope!. Others work on the idea that you can have their service free so long as you don't mind doubling your phone bill watching their advertising pages! ... so, what I want is specific details on the various firms ... who they are, what they provide, what they don't, and how free is free?!. If you can help, please let me know and if I get enough information I'll write it up so we can all find out which offer the best value. OK?. Paul Grade.

SPREADSHEETS . . . Ken Grade .

To tidy up the various points which were skated over in the last issue, here's some examples.

Setting up a sheet for outgoings/income for a (very) fictitious business, leave row 1 clear. Starting with B2 would be heading such as:-

	B2	C2	D2	E2	F2	G2
	RENT	RATES	WATER	INSURANCE		WAGES
SERVICES						
MONTHLY (1)	300.50	100.00	80.00	50.00	4,500	500.00
(2)	300.50				4,250	650.00
etc					3,995	525.00
up to (12)					4,750	
ANNUAL	@SUM(B3..B15)	(C3..C12)	(D3..D12)	(E3..E15)	(F3..F15)	(G3..G15)
	3,606.00	1000.00	800.00	600.00		

AVERAGES

@AVG(F3..F15) (G3..G15)

(Rates and water are usually billed for 10 months, hence columns C and D are totalled from 3 to 12). Next column, H, is for total outgoings, I for Income (coincidence!), J for net income.

	H2	I2	J2	K2
	TOTAL OUTGOINGS	INCOME	NET INCOME	OTHER ANALYSES
@SUM(B3..G3)		5000.00	+I3-H3	@SUM(H3..H15) } ANNUAL TOTAL
@SUM(B4..G4)		4500.00	+I4-H4	@SUM(B16..G16)} OUTGOINGS-
ETC			ETC	should be the same total.

To state the obvious, the formulae @SUM(and @AVG(can be copied horizontally by the same method as vertical copying." /C", press ENTER, then the period and move the cursor with arrow key right or left to cover the columns which need to be added, then press ENTER again. The formula is adjusted to suit the columns.

There are several variations on this theme - the layout is a matter of personal preference, and readability. When it comes to printing the sheet, there is obviously more data on a sheet like this than will fit onto standard width paper (I suppose that's what 140 column printers were built for). Any section of the worksheet can be printed, and there's a Range command to define the area. This is accessed from the PRINT menu. The range is mapped out by moving the cursor horizontally or up/down, which causes the area to appear red (in ASEASYAS). Press ENTER, then go to GO, and it should print. If the area to be printed isn't close to the cursor when you start the Range function, then move the cursor until it is, then press enter. This returns you to the Range command on the menu, so press Enter again, and define the range with the cursor. Costing a job by itemising the various materials and labour is one of the obvious uses for a spreadsheet. I used to know a quantity surveyor who had to do the job on paper until he discovered Lotus. The trouble was that he couldn't persuade his firm to buy a computer...I'm not sure whether he stayed with the firm for long after that. Anyway, for headings there's a whole range, depending what sort of Job it is. Then there could be a choice of supplier or part/material.

A2	B2	C2	D2
	Supplier1(Cost price)	Supplier 2	Retail price
Oil	10.00	8.00	18.00
Filters	8.00	9.50	15.00
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The row of minus signs is to underline the headings. That's all for now.

The Late Late Bit

Here we go again!. If this issue is anything to judge by, the Dreaded Millennium Bug seems to be worrying far more people that I expected, and I still can't see why. OK, so it will be The End of Civilisation as we Know it ... or perhaps not. There's the horror stories about 747's falling on your head because their flight control systems will decide that, because of the date, they haven't been invented yet, so will immediately stop working, and similar garbage, but there is not the slightest reason to suppose that any aircraft control system knows or cares what the bloody date might be!. Why should they? ... the nearest they need to that sort of thing is a clock chip and a timer or two. Same applies to 99% of "computerised" systems, the hardware is fine because dates simply aren't relevant to its operation, and even if they were, a simple BIOS patch would solve any problems. The people who really NEED to worry are the ones who use "custom software" on their systems ... mainly big companies, Councils, and Government departments, because most of the idle prats who wrote the stuff originally simply nicked routines from other people's programs, and that included the old "two figure year" convention!. So hard luck!. If the "victims" had any sense at all they would sue the writers/suppliers for flogging them software that was "unfit for the purpose for which it was purchased" etc, after all, "demo" versions of programs as supplied on the average cover disc are FREE, because they are "time trapped", if you want the "use it for ever" full version it costs you big money, so surely any charge made for software which will drop dead at 00.01a.m on 1st Jan 2K should be refunded in full, as like the "demo" stuff, it is time trapped?!. Wonder how much Bill Gates and several others would have left if they had to pay everyone a full refund plus compensation AND supply fully operational replacements free?!. Making rather suspect patch routines available for downloading just isn't good enough legally, especially when you have to download them via a dead slow Californian connection!. Personally I'm getting very tired of all this "Millennium" rubbish ... Jan.1st next year is just another dreary day in just another dreary year, so why all the fuss?. I don't remember reading of any great excitement in Y1K, do you?, so why all the fuss now?. And of course, there's always the rumour that the Great Millennium Dome Project DIDN'T originate with Tony the Twat and his gang at all, the first dome was started sometime around a couple of years BC on a site near Salisbury, but owing to a total lack of interest by the locals it was never completed the site is still there just as the contractors left it. Take a look sometime I think they call it Stonehenge now.

So what else is new? ... not a lot, except that I've been playing with Win 98 (no, NOT on my own machine!) and the only conclusion I have reached about it is that it must have been written by dedicated entomologists rather than programmers! ... more bugs than the average dog has fleas!, and WHY does everything have be "simplified" to the level of an intellectually challenged chimpanzee?. It's not just bloody insulting, the thing is so damned "user friendly" that you can't do anything useful with it at all!. That's progress?!

On a more relevant point for a moment, I regret to inform you that hardly anyone took Stephen up on his suggestion about writing "something for Update" during the Christmas/New Year period ... or if they did they forgot to post it, which means that this issue is decidedly article deficient, and the next one will probably consist of blank pages unless some of you do something to rectify the situation. I'm damned if I'm going to write the entire issue myself, and somehow I very much doubt that Stephen or Mike will offer to do so, so it's up to you there may not be so many of you now, I know, but if everyone were to write just ONE page for us we'd have enough material to last well into 2001, so why not at least make an attempt?. If you're really stuck for ideas, why not a page on why you can't write anything, or a page of original excuses?.

Oh well, I suppose I'd better stop whining about lack of material and get the little we HAVE got ready for copying and no, that's not one of my favourite hobbies either!. Roll on Christmas!. Paul Grade.

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