This month in

SIXTEEN BITS

Editorial Information

We welcome submissions of articles from members of the Group. If you are interested in writing please contact the Managing Editor and ask for a copy of our '*SIXTEEN BITS - Guidelines for Authors'* (also available on the *Sixteen Bits* Web site at *http://www.pcug.org.au/pcug/16bits/16guide.htm*).

Correspondence and material for review or publication should be forwarded, preferably as a plain text file with separate PCX/BMP graphic files, by the deadline specified, to the Editor as follows:

- By email to *pcug.editor@pcug.org.au*
- By fax to (02) 6253 4922
- By mail to the Centre's address above.

Anonymous contributions will not be published, though name and address can be withheld from publication on request. Disks are not returned unless requested by the author.

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Managing Editor
Tamsin Sowden
pcug.editor@pcug.org.au

Assistant Editor
Anne Greiner
agreiner@pcug.org.au

Editorial Team
Mike Burke, Vic Bushell,
Andrew Clayton, Anne Greiner,
Emil Joseph, Malcolm Morrison

Cover Design
Russell Kerrison

Technical Editor
Michael Phillips

Commercial Advertising Manager
Ken Livingston (02) 6285 3747 (bh)
(02) 6253 4922 fax
pcug.ads@pcug.org.au

Production
Petra Dwyer and the Stuffing Team

Contributors for this issue
Greg Baker, Mike Burke, Anne Greiner,
Chess Krawczyk, Malcolm Morrison,
Glenn Pure, Stephen Saunders,
Nick Thomson, Phil Trudinger

Authors and Advertisers please note

Articles from SIXTEEN BITS are also published on the Internet as *Sixteen Bits Online* at *http://www.pcug.org.au/pcug/16bits/* and extracts are read on Radio 1RPH (1125AM) Thursdays 10.45am & 9.45pm.

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PCUG Committee

President	**Ann Byrne**	6282 2536
	pcug.president@pcug.org.au	
Vice President	**Mike Gellard**	6258 2361
	mgellard@pcug.org.au	
Secretary & Public Officer	**Hugh Bambrick**	6249 7667
	pcug.secretary@pcug.org.au	
Treasurer	**Hugh Alston**	
	pcug.treasurer@pcug.org.au	
Training Officer	**David Schwabe**	6254 9086
	pcug.training@pcug.org.au	
Network Administrator	**Craig Gibson**	
	pcug.lan@pcug.org.au	
BBS Sysop	**Michael Phillips**	6281 1980
	pcug.sysop@pcug.org.au	
General Committee	**Allan Mikkelsen**	6278 3164
	amikkels@pcug.org.au	
General Committee	**David Schwabe**	6254 9086
	dschwabe@pcug.org.au	
General Committee	**Ken Livingston**	6285 3747
	kenliv@pcug.org.au	
General Committee	**Rod Farr**	6286 1597
	rodf@pcug.org.au	
General Committee	**Iain Gould**	6255 2405
	iain@pcug.org.au	
General Committee	**Darrell Burkey**	
	dburkey@pcug.org.au	
Immediate Past President	**Karl Auer**	6248 6607
	kauer@pcug.org.au	

PCUG Committee email to: *pcug.committee@pcug.org.au*

Other Contacts

Executive Secretary	**Petra Dwyer**	6258 2099
	pcug.execsec@pcug.org.au	
Membership Secretary	**Mike Burke**	
	pcug.membership@pcug.org.au	

The phone numbers listed above are home numbers unless otherwise specified. **Please restrict calls to between 7.30pm and 9.00pm.**

New Members' Information Night

7.30pm *first* Monday of the month PC Users Group Centre, Northpoint Plaza Belconnen.

How To Make Contact

✉ **Postal address**
PO Box 42
Belconnen ACT 2616
(For *ALL* correspondence)

☺ **PC Users Group Centre**
Northpoint Plaza, Belconnen
Open Mon, Wed and Fri 10am-2pm
Saturdays and Sundays 9am-5pm
(closed long weekends)

The PCUG Centre is the venue for PCUG training, some Special Interest Group meetings and other activities. There is no charge for using the Centre for *PCUG activities*. Contact Petra Dwyer at the PCUG Centre on (02) 6253 4911 for bookings.

☎ **PCUG Main Phone number**
(02) 6253 4911
(Answering machine when Centre unattended)

▤ **Fax number**
(02) 6253 4922

Email
pcug@pcug.org.au (or use addresses at left)

The INTERNET Project
(02) 6206 6200 *help@pcug.org.au*

🌍 **World Wide Web page**
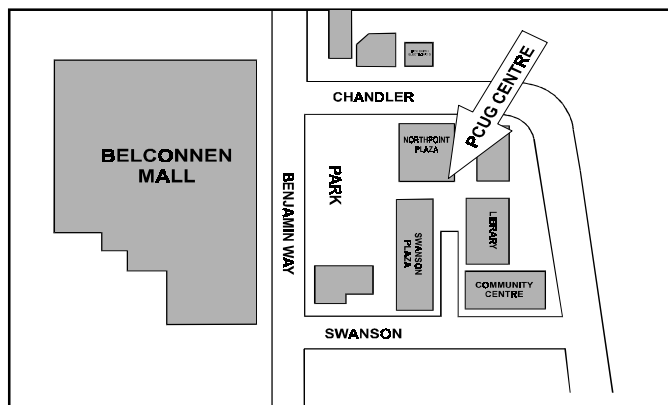*http://www.pcug.org.au/pcug/*

💻 **Bulletin Board Service (BBS)**
(02) 6253 4933 (5 lines 33.6k bbs)
Fidonet address 3:620/243

☎ **BBS Sysop voice number**
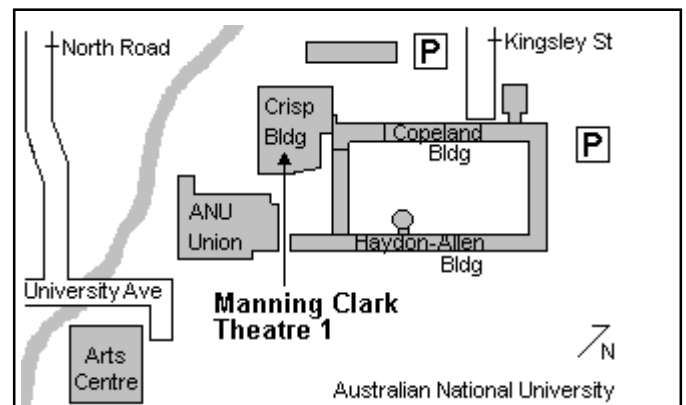(02) 6253 4966 (6.00pm - 9.00pm)

Main Meeting

Main meetings are held 7.00pm for 7.30pm, *usually* on the last Monday of every month at Manning Clark Theatre 1, Crisp Building Australian National University.

Editor's Desk Top

Tamsin Sowden, Managing Editor

Never let it be said that things never change at *Sixteen Bits*. As I said in my first editorial back in June, my sojourn as editor could only be short due to work and study commitments and, alas, that time will end with the October issue. However, a member with writing experience, an interest in desktop publishing and plenty of time on his hands has put his hand up for the job. His name is Vic Bushell and he has been a PCUG member for a number of years. Vic will gird up his loins, strap on his armour, sharpen up his sword and step into the breach for the November issue. But you won't get rid of me that quickly! I will lurk about in the background and help out with the electronic version of *Sixteen Bits* – particularly with helping to make the PDF version more accessible.

I have started to get a good response to my call for more articles from you, our *Sixteen Bits* readers. This month, Chess Krawcyzk takes us on his journey to upgrade his PC and Stephen Saunders, whose son is a keen PCUG member, reviews two books on the weird, virtual world of computing subculture. In coming months, we'll review Quick View Plus and the games Atomic Bomberman and Neverhood.

Also this month, you will notice the centre of the magazine contains the annual financial statements for the year ended June 1997. See where your money's been going for the last twelve months – oddly, I can't find any mention of those trips to the Bahamas the Committee keeps on making, nor the cases of champagne and jars of caviar they consume every third Wednesday. (Well, they must become Committee members for *some* reason!)

The results of the member survey we ran in the June issue are at page 21 – it makes interesting reading, and it's gratifying to see that *Sixteen Bits* is rated the most important service of the Group. That will really fire Vic and me to make sure we simply get better and better.

Finally, many thanks to Rod Farr and all those who helped out at the Volunteers' Day held at the Centre a couple of weeks ago. Photographic evidence (courtesy of Don Darling and his devilish digital camera) of the shenanigans appears on pages 34 and 35. I've had so much fun with these photos that I think we'll make a photos page a regular spot. It's a good way of making members and volunteers known to one another. So watch out next time you're at the Centre – a click and a flash and you could find yourself starring in *Sixteen Bits!* 🖳

President's Letter

Ann Byrne, President

This is my last report as president of the PCUG, so I make no apologies for being slightly indulgent. The last six years as a member of the group and the Committee (yes, I put my hand up for the Committee in my first year) have been nothing if not an education. The group has come a tremendous way from Belconnen High School, to Fyshwick and back to Belconnen. I remember how proud we were of the Fyshwick premises – that is until we hit our first winter, when we realised that high ceilings were not a good idea! There were those (aren't there always) who said the move was a big mistake, we couldn't afford it, no-one would use it etc, etc. Luckily there were enough Committee members to have the foresight to see that we needed to grow.

I remember being huddled close to the heater one Wednesday night in July 1994 when Karl first broached the idea of having an Internet connection. While I had heard of the Internet I didn't have clue about the intricacies of how we would connect. His enthusiasm was catching for most of us, and yes, the doom and gloom people popped their heads up again. However, the majority once again ruled and as they say 'The rest is history'.

In 1996 the Committee decided that while Fyshwick had been a positive move we needed to look for more 'user friendly' premises. After many months the Belconnen premises were decided upon. We relied on our treasurer Hugh Alston to let us know what we could and could not afford. The official opening of the premises took place in October 1996, even though TIP was still to reside in Fyshwick for another month.

So, in my six years on the Committee we have made a major change every two years. I wonder what the new Committee has in mind for 1998?

If I tried to thank everyone by name for their help and support in my two years as President I would need the whole magazine; however one cannot step down without many thanks to Petra who is the thread that holds us all together – nothing is ever too much trouble for her and I can only urge the incoming Committee to take good care of her or I will come back to haunt you!

Thanks also to the Committee over the past two years for their hard work and help in all areas. I think the financial reports say it all. We have a healthy profit this year and our Treasurer must take the credit for spending much time on keeping us up-to-date and aware of our financial status each month (despite not using accrual accounting for the monthly reports).

So it is with some sadness, but with a certain amount of expectation on reclaiming at least 20% of my life, that I step down as President of the group. As Immediate Past President I intend to take a back seat and only be available when needed (if ever). However I still intend to be an active volunteer in other areas and look forward to helping out.

To the incoming Committee, my best wishes, roll with the punches and have fun! 🖳

Letters
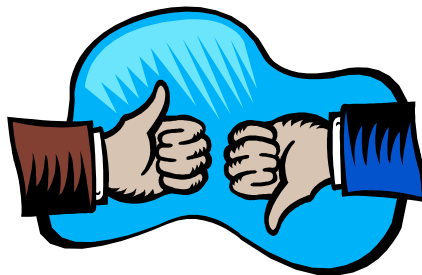
Dear Editor and Fellow PCUG Members

I would like to take the opportunity to respond to letters from David Robertson and Mark Hummel published in the July edition of *Sixteen Bits*, both mounting an opposing argument to my suggestion that the present PCUG Progressive Charging System (PCS) should be reviewed.

Firstly, let me clarify from the outset that I have no connection with commercial interests whatsoever and at no stage have I suggested that the PCUG should move towards a commercial operating basis. I am not aware of any particular pressure for the PCUG to 'commercialise' its activities and would hope that it retains the essentially 'users helping users' status that we currently enjoy.

From my own perspective, I think it is regrettable that David Robertson has suggested that a review of the PCS could be 'the beginning of the end' for PCUG ! Surely, David, that is somewhat overstating the situation?

But let's get back to my implied self interest. I suspect that many fellow PCUG members, like myself, are not content with simply using the TIP facility for checking their daily email and newsgroups, plus a modicum of nightly browsing on the Web. In my own particular case, I am utilising IRC and experimenting with audio, video and general data transmission. I see these sorts of activities as very much in the forefront of current Web development and certainly wish to participate in the rather exciting possibilities offered by such technological breakthoughs. These are the types of activities that I consider would be attractive to the more technically inclined PCUG members. Certainly these types of communications options have the potential to become routine fare, if not now, then certainly in the future. The only problem with this leading edge experimentation is that it consumes many hours of on-line time.

My own personal circumstances quite often allow me to access TIP very late at night (usually after midnight) and sometimes during the day. I can clearly see from the PCUG access monitoring facility that often there are very few people connected to TIP at what would be generally regarded as irregular hours. The proposal that I put forward readily acknowledges that the original intention of the Progressive Charging System was indeed to encourage people to log off after a reasonable time, as Mark Hummel suggests. I fully agree with that proposition and clearly suggested in the June editorial that the PCS arrangements should perhaps be retained during peak hours – say 6pm until midnight each day, which seems to be where the greatest demand lies.

However, in times of obvious low congestion, I see it as rather questionable that members generally should be paying a premium when they are clearly not inconveniencing anybody by remaining on-line for extended periods. If subsequent experience demonstrated increased congestion in the early or daytime hours, then access arrangements would again need review. I see this as an ongoing process as human nature predicates that members will be quick to identify any unacceptable congestion difficulties.

If the proposal to review the PCS represents some sinister form of self interest, as perceived by David Robertson, then I guess I have to accept the criticism. I simply saw the proposition in terms of basic fairness and equity to members. If there is no logical rationale to support imposing a penalty on extended on-line access outside peak demand periods, then what is the point of doing it? As a certain prominent politician recently said, 'please explain???'

I hope that we can keep this debate in perspective and consider the options based on a logical consideration of available data to quantify access trends, balanced of course against any potential impact on operating costs, plus that very important consideration – the general interests of PCUG members as a whole. Iain Gould has also put forward some salient points in the July edition of *Sixteen Bits* about the need to minimise the administrative complexities of TIP – these issues are also grist to the mill and contribute to the wider, and hopefully robust, debate.

Regards

Geoff Mann

Dear Editor and fellow PCUG members

In the August edition of Sixteen Bits, Hugh Bambrick wrote that 'nominees for election to the committee were requested to provide profiles for publication so that the membership at large may learn something about them'. He went on to say that 'non-provision of a nominee's profile may tell us something about that nominee'.

As one of the non-providers, I'm not sure what it would be that one could conclude, but let me explain.

I have been a member of the group since 1995 and was one of the first Internet project subscribers. Since then, I have been shamelessly taking the volunteer efforts of many others with no thought of ever doing anything in return. I came to the conclusion after reading the questions in the recent survey that the group may be entering troubled times and, since I did not want to see it fail through lack of support, decided to volunteer my time to serve on the committee. I don't really want to do it. I'd rather someone else did it, but I'd much rather see it done by me than not done at all. As a consequence, I submitted

a nomination. I noted the request to provide a profile, so that the electors could make a judgment and was in fact going to provide one, pretty much along the lines of this paragraph. I was notified that through an insufficiency of nominations, I was duly elected and concluded that the requirement for the profile was therefore nulliified and that none would be published. I was obviously wrong. So, I don't know what conclusion the readers drew from my failure to provide a profile, but the correct one to draw is that I leapt to a conclusion incorrectly. I hope to do better in the future.

George Beaton

Dear Editor

Congratulations on getting back to technical matters. Glenn Pure's article was well timed. I had recently been dwelling on the good old days of Anthony Glen's articles on serial communications and matters of modems and telephone lines. Are there any others out there who could put fingers to keyboard and enlighten the masses on matters technical? It would be useful to have an article on PCMCIA bus settings.

All this talk about commercialisation of the group is most concerning – the group has grown on the backs of people who have to my mind been quite selfless. It would be a very real pity if we let the group slide into demutualisation. That isn't to say the group and people around it should not turn a quid from being associated with it but it shouldn't in my opinion be the driving force.

There has been a lot of talk lately re changes to TIP – if it's working, leave it alone. Karl and the crew have taken it to a very professional level and I would not like to see something which works well for so many tampered with for the benefit a few.

When you talk about 'founding father' I always think of Chess introducing Bill Gates to the group at the Canberra Club dressed as Charlie Chaplin.

Wayne Brown

Dear Editor

I would like to see a SIG that would seek to help its members make decisions on personal development opportunities (a sort of vocational guidance advisory group). I imagine such a SIG would do software and hardware reviews that would examine the now; the possible; and the should.

As one of its possible activities it could poll heavy users and developers for opinions on the usefulness and further direction of computer innovations.

Its members would be prepared to follow the dictum of 'users helping users'.

If any others of the PCUG would like to explore the possibilities for the creation of such a SIG they are welcome to telephone me, Don Nicol, on 6254 6584.

Don Nicol

Dear Editor

Having read the first part in Greg Baker's introductory guide to HTML last week I think it should be pointed out that the current HTML recommendation is 3.2. More information can be obtained from the W3C web page at *http://www.w3.org/MarkUp/Wilbur/*.

Nicolas Baker

Thanks for the useful URL, Nicolas. Yes, I did realise that the HTML standard has advanced; however, I think Greg's article is still a helpful guide for the rank beginner. -Ed.

Membership Notes

by Mike Burke
Membership Secretary

Welcome to new members reading *Sixteen Bits* for the first time, welcome to the PC Users Group. Continuing members should also check this column regularly because I am sure that there will be some little surprises from time to time, even for the most jaded of old hands.

If your PCUG
membership expires at
the end of October 1997
RENEW NOW
to avoid losing access to
The Internet Project.

Your Membership Card

Your membership card will be mailed to you as soon as possible after your application for membership, or renewal, has been processed. This will normally occur within one week of your receipt of your first issue of *Sixteen Bits*. Please be patient, however. There is only one print run of mailing and membership labels every month, and this normally occurs over the weekend immediately before the *Sixteen Bits* stuffing day (normally the third Monday in the month). Normally, membership cards and disks will be dispatched on the third Monday. If you lose your card, please leave a message with the Executive Secretary on 6253 4911, or contact me directly via TIP at *pcug.membership@pcug.org.au*.

Information Disk

New members should also receive a disk containing information about the Group and its services. Please read the information on the disk carefully as you will find the answers to most of your questions there.

New Members' Information Night

New members are especially urged to attend a New Members' Information Night which is normally held at 7.30pm on the first Monday of the month (except January) at the PC Users Group Centre (see map page 3). These meetings are a chance for new and 'older' members (who are always welcome to attend) to meet with representatives of the Committee, to put names to faces, and to ask any questions that you may have about the Group and its activities. Tea and coffee are available, and the atmosphere is informal and friendly.

Main Meetings

Our main meetings, targeted at our general membership, are normally held monthly, on the last Monday of the month. The date, venue and topic of the meeting always appear on the front cover of *Sixteen Bits* which is timed to arrive in your mail-box in the middle of the week before the next main meeting. Main meetings are also advertised in the computing section of the Canberra Times on the day of the meeting. Anyone is welcome to attend these meetings—you do not need to be a member. For main meetings, we arrange guest speakers on a variety of topics throughout the year. As an added incentive, there are usually a couple of door prizes to be won. You've got to be in it to win it. There is no main meeting in December.

Special Events

We also have some special events such as the 'Bring and Buy Night' at the Albert Hall in November, and an annual Quiz Night in April. You should read *Sixteen Bits* thoroughly as special events are publicised mainly through the magazine.

Annual General Meeting

The Annual General Meeting is held in September each year. Even if you are unable to attend Main Meetings regularly, members should make every effort to attend this Meeting at which office bearers for the ensuing 12 months are elected.

The 'Rules' and Other Good Stuff

For those who haven't yet learnt through bitter personal experience, please remember that TIP access is dependent on your continuing PCUG membership, and that it takes time to process your membership renewal - currently up to two weeks. We are looking at ways to reduce this time, but the best solution is for you to remember to renew early. Members, particularly TIP users, whose PCUG membership expires at the end of the month stated in the above box should renew their PCUG membership immediately. Do not delay because your TIP access will automatically be cut off at midnight on the last day of the month unless your renewal has been processed.

Don't forget! **RENEW TODAY**, if not yesterday, if this copy of *Sixteen Bits* arrived with a pink label.

For those of you who would like to try it, John Carroll has produced a natty little Windows program that can be configured to automatically provide you with up to 90 days' prior warning of your PCUG membership expiry. The program is now included on the New Members' Disk, and is currently available from the BBS.

Next New Members' Night
6 October 1997
7.30pm
PCUG Centre
Northpoint Plaza, Belconnen

MICRO Magic!

The second of a two part series we began last month on microprocessors by Glenn Pure (glennpur@pcug.org.au)

Let's now have a look at an internal functional diagram of a 'typical' simplified microprocessor (Figure 3). Starting with the data bus, incoming data (or instructions) first encounters a control unit that determines whether the microprocessor is currently accepting data and if so, where it is to be sent internally. If the microprocessor is currently doing some internal operation that doesn't require outside data, it will probably have told the control unit to turn its external data lines off.

In the case of incoming data, there are several possible destinations:

- If the microprocessor is expecting an instruction, it will be shunted to the instruction register which, in turn, will be read by the instruction decoder. This will generate the appropriate internal (and external) signals to actually execute the instruction.

- It could go to the Arithmetic Logic Unit (ALU) which is the piece of circuitry that does addition, logical operations and other data processing. The ALU contains a special storage location or register which is sometimes called the *accumulator*.

- It could go to a general purpose storage 'bin' called a central processing unit register, or *CPU register* for short. Microprocessors might have anything from 3 or 4 general purpose registers up to a dozen or more. The CPU registers simply provide a convenient internal storage point for data prior to it being

processed in the ALU or being used elsewhere.

- Lastly, the data might end up in one of the *address registers*. These are special purpose registers which connect to the microprocessor's address lines and are used for sending addresses from the processor. There

FPUs are very complex as Intel can testify to its great expense. One of its first Pentium processors had a minor flaw in the FPU which eventually forced Intel to recall and replace them all.

would normally be at least two address registers. One would be the *instruction pointer* which points to the memory location that is currently being used to fetch instructions from (ie where the user's software is loaded). The other address register would be a general purpose one that could point to data (for example, a word processing document). In some microprocessors, the address and data registers are part of one common pool of registers.

Newer microprocessors have other components as well although I don't intend to cover most of these. For example, they can have caches which I explain a bit later. They can also have floating point units (FPUs). These are like ALUs except that they do mathematics on numbers with decimal points in them (floating point

numbers). FPUs are very complex as Intel can testify to its great expense. One of its first Pentium processors had a minor flaw in the FPU which eventually forced Intel to recall and replace them all.

To help give you a better understanding of how the different parts of the microprocessor work together, let's look at a simple example which involves the execution of three instructions. The first instruction tells the microprocessor to read memory location 8245 and place its contents into the ALU's accumulator. The next instruction is to add this value to the value in CPU register B. The final instruction tells the microprocessor to write the result of the addition to memory location 5432. Before getting into the detail, I should point out this these three instructions would probably arrive as five words:

- the first word would be the instruction to fetch data from memory and place it in the accumulator
- the second word would be the address in memory to fetch the data from (ie address 8245)
- the third word would be the instruction to add the contents of the accumulator to the contents of register B
- the fourth word would be the instruction to write the contents of the accumulator to memory

TIP 'Monopoly' Hours

TIP has now been operating for over two and a half years and the Internet Project Management Committee has decided it is time to modify the 'monopoly' hours scheme which is used to discourage overuse of TIP facilities. From 1 October 1997, the 'penalty' rates will start to operate after TWO hours use on any day, not one hour as at present. TIP time logged on will be debited to your account at the following rates:

First TWO hours	one minute per minute of use
Third hour	two minutes per minute of use
Fourth hour	three minutes per minute of use
Twenty-fourth hour	twenty-three minutes per minute of use

Note that these rates apply for time used on any day (midnight to midnight), NOT used in a single session. A one hour session in the morning, followed by a two hour session in the evening, will cost FOUR hours time. A four hour session from 10.00pm one evening to 2.00am the next morning will cost only four hours, provided you do not otherwise use TIP on either day.

Usage rates of TIP will be closely monitored to ensure that service levels do not deteriorate as a result of this decision.
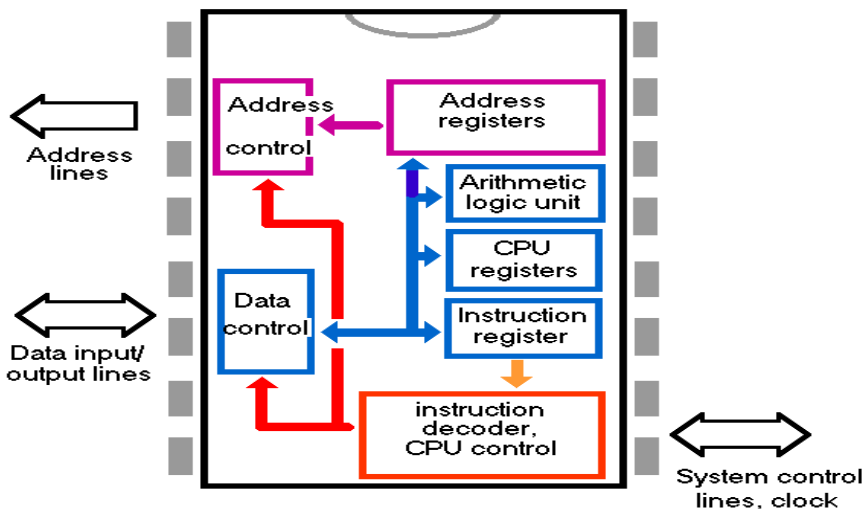
IPMC, September 1997.

Figure 3–Simplified microprocessor internal architecture

- the final word would be the memory address to write the result to (ie 5432).

Here's how the processing would occur (refer to the details in Figure 3):

1. The instruction pointer in the address registers contains the memory address of the first instruction to fetch. The instruction pointer connects, through the address control unit, to the microprocessor's address lines.
2. The microprocessor switches on its read line.
3. After waiting a moment the microprocessor then turns its data control unit on to accept input, and this input is switched through to the instruction register.
4. The new word in the instruction register is then interpreted by the instruction decoder. This tells the microprocessor that it needs to fetch the next 'instruction' from memory before doing anything else.
5. To do this, the instruction pointer is incremented by 1 and steps 1–3 above are repeated, except this time, that data arriving at step 3 (the number 8245) would be placed in the general purpose address register.
6. The microprocessor now connects the general purpose address register to the address lines.

7. The data at address 8245 is fetched as per steps 2 and 3 above except the incoming data will be shunted to the accumulator.
8. The instruction pointer is incremented yet again, and the next instruction is fetched from memory as per steps 1–3 above.
9. When decoded by the instruction decoder, it tells the microprocessor to send the data in CPU register B to the ALU where it is to be added to the value in the accumulator.
10. The instruction pointer is incremented again and the next instruction fetched and decoded as above. This tells the microprocessor to fetch yet another instruction (which contains the memory address to write the result to ie 5432).
11. This instruction is fetched and shunted to the general purpose address register (where it will overwrite the old value in that register).
12. The general purpose address register is connected to the microprocessor's address lines.
13. The data in the accumulator is sent from the microprocessor to memory. The microprocessor turn its 'write' line on and the data is written to the desired address.

RISC

Following on from the discussion about microprocessor clocks there is another related subject worth a look. You may have seen the term RISC when referring to microprocessors. RISC processors generally have very fast clock speeds. These processors are found in a variety of computers, most commonly a number of the more recent Macintosh machines (the ones with Power PC processors). RISC stands for *reduced instruction set computing*. This is a very apt description because RISC processors have a much simpler and smaller instruction set than other microprocessors. The Intel 80x86 and Pentium processors are complex instruction set processors – they are not RISC machines, especially now that Intel has added a whole raft of new instructions to the latest models to improve multimedia handling (the MMX extensions). Complex instruction set processors require lots of complex instruction decoding circuitry and for this reason run significantly slower than comparable RISC processors.

The idea behind RISC is that a smaller instruction set means a much simpler and more compact internal layout. That also means a substantially faster microprocessor. The penalty is that to perform the same operations as a complex instruction set processor, the RISC machine might have to execute more instructions. So some or all of the clock speed advantage can be lost. However, the designers of RISC chips choose the instructions they support very carefully. They look at lots and lots of software to see which types of instructions are used most commonly and make sure these form part of the core RISC instruction set. So in many cases, a RISC chip might need the same number of instructions as a complex instruction set processor. In these cases, a RISC machine can well and truly outperform a complex instruction set machine of similar vintage.

Caches

While on the subject of microprocessor speed performance, there are other methods to improve performance and speed. The use of a *cache* is one such method in wide use and is applicable to
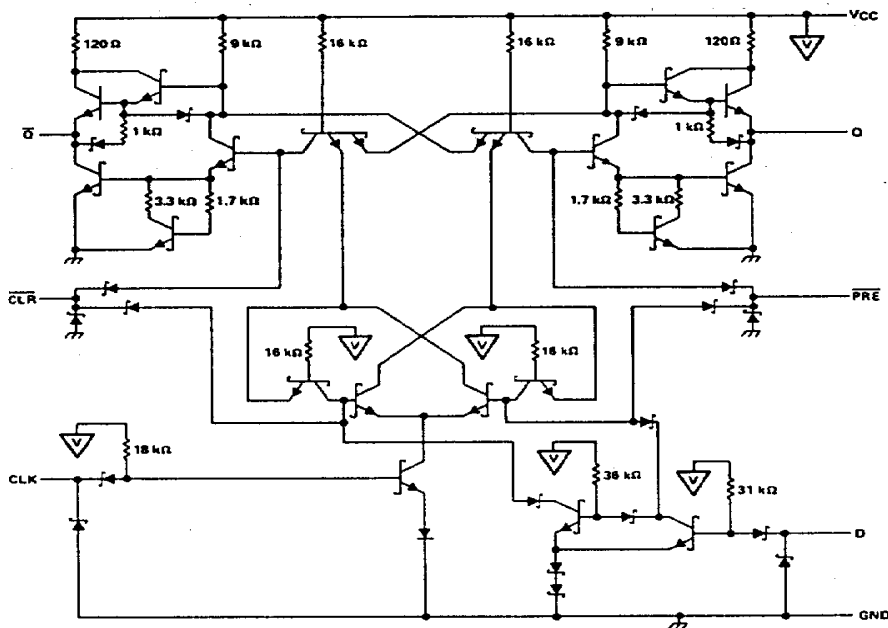
Figure 4–Circuit needed to store a single bit in a static RAM (SRAM). Courtesy of Texas Instruments

both RISC and complex instruction set machines. A cache is an additional chunk of memory that sits right next to the microprocessor, or is actually part of the microprocessor chip in newer devices.

For some time now, engineers have known that a limiting factor on processor performance is the speed with which it can fetch instructions or data from memory. One of the reasons is the slow speed of conventional computer memory – especially compared with processor speeds today. The solution is to provide some really fast access memory sitting very close to the processor. This is what the cache is.

Caches really make a huge difference to performance. I remember some years ago, a technician replaced the main board in my work computer with a new one. The new one had an Intel 80486 DX2 66 MHz processor. However, he forgot to set it up with the processor's internal cache enabled. I couldn't believe how poorly the computer performed. My guess was something like a five-fold increase in speed after the on-board cache was activated.

There are actually different classes of cache. Level 1 (L1) cache is usually small and very, very fast. It sits on the processor

chip right next to where it is needed. Level 2 cache feeds the level 1 cache but is slower and bigger. Level 2 cache can be found on the chip or physically separate. It's even possible to have level 3 caches although I suspect they aren't very common.

When you see the cache size mentioned in computer ads, it usually refers to the level 2 cache. On many of the Pentium chips now, the L2 cache is 512,000 (512 K) bytes. The latest Macintoshes with Power PC microprocessors from Motorola have similar L2 cache sizes. I'm no expert on these but from looking at the technical data on the Motorola devices, it would appear that this L2 cache is located off the processor chip. The actual cache (presumably L1) that is physically part of the high end Power PC processors is of the order of 64 K bytes in size.

For the cache to work there has to be some extra control circuitry that keeps the cache loaded up with data and instructions from the main memory. This extra circuitry has to keep tabs on where the microprocessor is currently getting this information. Again, branch instructions do cause problems. Special algorithms are used to make a best estimate of where the data/instructions will

be needed from next. Such algorithms are still very much in the development stage and this is an important area of microprocessor/cache research.

If memory serves me correctly, even processors as primitive as the Intel 80286 (or 286 for short) had a small cache but it only consisted of a few bytes of storage.

Computer memory jargon decoded

By now you will have picked up that the microprocessor and memory work very closely together. It's worth taking a quick look at some of the main types of memory, why they are different and what the seemingly endless jargon means.

Until recently, life was simple. Virtually all computer memory was of the DRAM type. This is short for *dynamic random access memory*. Let's start with the *random access* part of the name. This actually had its origins back in the early days of computing when a lot of information was stored on tapes. Just like video or audio tapes, computer tapes are *sequential access* – that is you might have to feed a whole lot of unwanted tape through the tape reader before getting to the bits you want. Memory chips don't work like this. The computer can jump to any location in memory whenever it wants, without having to read through all the other bits first. In other words, random access.

The term *dynamic* RAM means the contents of the RAM are volatile. In fact, very volatile. Unless DRAMs are constantly 'refreshed' every thousandth of a second or so, they forget what was stored in them. Computers usually contain special circuits that are solely dedicated to refreshing the DRAMs. Unfortunately, while the refresh operation is occurring, the DRAM is not available to the microprocessor for reading and writing. So, what advantages do DRAMs have?

To understand the advantages, take a quick look at their less forgetful cousins – SRAMs. The 'S' in SRAM stands for *static* meaning 'not changing'. Static RAMs don't forget what has been written to them (at least not while they have power

connected to them). There is no refreshing and the SRAM contents are available all the time to the microprocessor. This is the reason, for example, that caches are often made from SRAMs.

Figure 4 (previous page) shows a diagram of the circuit to store a single bit (a 1 or a 0) in an SRAM. There is no need to understand the detail, but look at Figure 5 which shows the circuit to store the same bit in a DRAM. The latter consists of a single transistor, nothing more. DRAMs are vastly simpler to make and many more bits can be packed onto a memory chip because of their simplicity. This is the great advantage of the DRAM and the main reason they are preferred for general computer memories.

The transistor in a DRAM is of a special type called a *metal oxide semiconductor* (MOS) transistor. It is made from a layer of silicon semiconductor separated from a minute metal pad by a very thin oxide insulating layer (Figure 6). You can probably work out why they are called 'metal oxide semiconductor' transistors now. The oxide insulating layer is very thin and it can be easily burnt out by excess voltage. A common source of such voltage is static electricity and DRAMs must be handled in an anti-static environment. By the way, most of the 'chips' found in modern computers, including the microprocessor, are made from MOS transistors and are very susceptible to static damage. They too must be handled with appropriate caution.

EDO memory is the latest rage and many computers now ship with it. The full title of these memories is EDO DRAM.

Figure 6–Structure of an MOS transistor (metal-oxide-semiconductor)
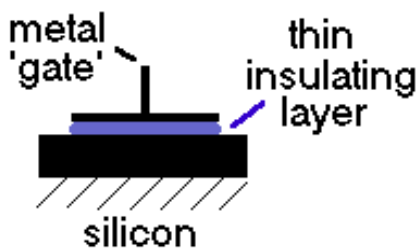
They are basically DRAMs except they have some design enhancements that substantially reduce the time needed for refreshing. The EDO stands for *extended data out* meaning the data stored in them is accessible for 'extended' periods. As such, EDO DRAMs can pump more data to the microprocessor over a given period of time compared with standard DRAMs. The faster the microprocessor can read and write data to main memory, the better.

There is another variation on the standard DRAM – the SDRAM. Don't confuse these with SRAMs. An SDRAM is a *synchronous* DRAM. Normal DRAMs are refreshed by a special controller but this refreshing process isn't directly synchronised with the microprocessor's master clock. On the other hand, SDRAMs have all their functions including refreshing synchronised with the master microprocessor clock. This has the effect of providing much greater availability to the microprocessor. The reason might not be immediately obvious but you can think of it like a busy road with a few sets of traffic lights along it. If all of the traffic lights are synchronised with one another, then the traffic will flow a lot better. However, if one set of lights works on its own timing schedule, then there is a reasonable chance that cars that made it through the previous set of lights will have to wait at the non-synchronised set.

The final category of memory I'll cover is EPROM. This stands for *erasable programmable read only memory*. EPROMs are non-volatile like SRAMs, but they retain their contents even when the power is switched off. The 'ROM' part of the name means they can normally only be read, not written to. EPROMs can be erased but only by placing them under a strong UV light. They have a special clear quartz window on top for this purpose and are easy to recognise because of this feature.

EPROMs are found on virtually all computer boards and store the so-called ROM BIOS. BIOS is short for *basic input output system*. The BIOS provides the start up or 'boot instructions' which allow the computer to enter a low level functional state when it is first switched
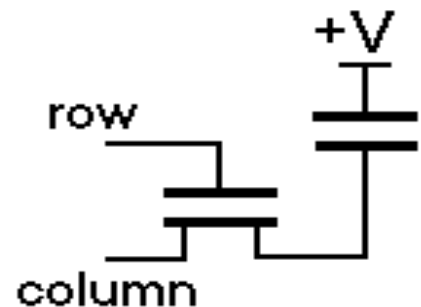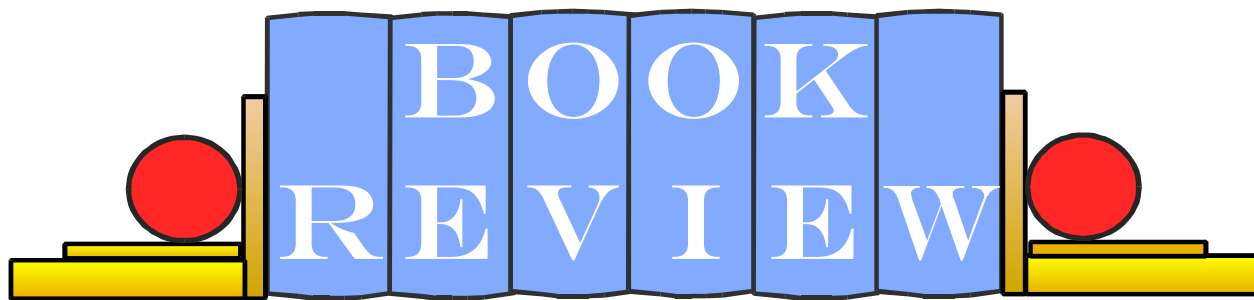
Figure 5–Circuit needed to store a single bit in a dynamic RAM (DRAM)

on. The BIOS EPROM is physically wired into a special set of system memory addresses that the microprocessor automatically goes to when it is powered up. These addresses are usually determined by the designer of the microprocessor and are permanently stored inside the microprocessor.

By the way, you might be wondering what happens after the BIOS executes. The last instructions in the BIOS tell the microprocessor to fetch its next instructions from a special location on the computer's hard disc (or floppy disc). This location is called the boot sector and the instructions located there tell the microprocessor where to find and execute the computer's operating system – whatever that may be, for example DOS, OS/2, Windows 95, UNIX, Mac OS etc. Once that task is done, the computer will be displayed with its familiar DOS prompt, Windows screen or whatever.

Well, I have ended up writing quite a bit more than I anticipated, and I still didn't cover everything I thought I might – for example, I haven't mentioned DMA (aren't you glad!). But worse still, my red wine glass is now approaching empty so I really had better finish. The stuff I have presented does get a bit technical at times but I hope you have been able to follow it and learn something new. If you have any questions, comments or criticisms, please feel free to email. I'll help where I can but I certainly don't class myself as an expert – I am still a frequent caller on the help desk hotline at work.

BOOK REVIEW

Reviewer: Stephen Saunders

UNDERGROUND: Tales of Hacking, Madness and Obsession on the Electronic Frontier.
By Suelette Dreyfus. Mandarin. 475pp. $19.95.
HARD, SOFT AND WET: The Digital Generation Comes of Age. By Melanie McGrath. Harper Collins. 296pp. $39.95.

Giving the lie to any notion that computing is a man's world, Suelette Dreyfus and Melanie McGrath have produced timely expositions of the computing subcultures.

Technically-minded persons may prefer the Dreyfus book, an inside view of the mysterious world of hacking – using networks to gain unauthorised entry to other people's computer systems. McGrath is more concerned with a social phenomenon – the new global village of Internet users.

Dreyfus, who gathered some of her material doing police and court rounds for *The Melbourne Herald*, shows that hacking is yet another non-contact sport at which Australians excel. The first chapter, where an unidentified bunch of Antipodeans send a mischievous computer 'worm' snaking through the NASA computers in America, is a classic.

The hacking cases that are documented date from the late 1980s or early 1990s, a Mesozoic Age of computing. The book still has currency in that some of the Australian cases have been through the courts just recently. Dreyfus praises the discernment of the Australian judges and their judgments but regards the underlying anti-hacking legislation as inappropriate and invidious. 'Almost any serious crime committed by a hacker,' she argues, 'could be committed by a non-hacker and pursued under other legislation. Fraud, wilful damage and dealing in stolen property are crimes regardless of the medium.'

In fact, the author admits a sneaking admiration for these 'quintessentially Australian ... rebels, public nuisances and dreamers.' Indeed, their escapades read like a madcap, real-time version of cops and robbers.

Using the computer equivalent of strings and rubber bands, these intrepid souls breached global defence, banking and university systems. Rarely did they damage systems or steal funds – that was regarded as gauche. They liked to hijack copies of highly-protected programs and hide them on other computer systems somewhere else in the world. They loved their running battles with the systems administrators.

One Australian using the name Mendax broke into a closely-guarded system and goosed the administrator by making the words 'I have finally become sentient' appear on his screen. Mendax has given the game away but, according to Dreyfus, new laws have not dissuaded a new generation of hackers. 'The hackers are still hacking,' she writes, but 'the underground has moved further underground.'

While I admire Dreyfus's research achievement, I would say that she has written a rather lengthy book for a small number of case studies.

Both Dreyfus and McGrath demonstrate the perils of 'virtual relationships'. Threaded through Underground is the star-crossed love affair of San Francisco hacker 'Par' and his Swiss counterpart 'Theorem'. The love-gone-wrong story in Hard, Soft and Wet is the author's own.

Before readers jump to salacious conclusions, I should point out that the title refers to hardware, software, and 'wetware' – that is, people.

Actually, most of McGrath's book is a kind of global tour of the community of email users and Internet chatterers. Over a four-year period, she travelled around USA, UK, Iceland, eastern Europe, and Singapore, to party with computer enthusiasts and watch them at play. Her sharp observations are as much about herself as they are about the computer freaks.

A local at the Reykjavik Internet cafe advises her that they have 'long winters so the teenage women make babies and the teenage men make computer programs.' In San Francisco, she reports the opening of new a Center for Online Addiction – on email only! Back in England, she meets a young woman who answers suicidal emails on behalf of the Samaritans.

The author has a love-hate relationship with her home country. 'To me at seventeen, California and Californians stood for the two things Britain lost a hundred years ago. Modernity and abundance.' Later, she returns to a 'sweet, contrary England, too proud to decline with grace and yet too timid to look ahead.'

Similarly, the author develops mixed feelings for the London teenager who becomes her lover after months of Internet Relay Chat: 'Email merely gave us the illusion of commanding each other's absolute attention but it's now plain that Mac is too much preoccupied by his own inner world to want to pass much time exploring mine, inner or outer.'

McGrath closes on a note of delayed self-realisation. 'For fifteen years,' she confesses, 'I lived as an adolescent lives ... It's becoming clear what this recent love affair with the digital world meant to me. It was a form of time-travel. It drew me forwards into the future and pulled me back into my own adolescence.'

CD ROM
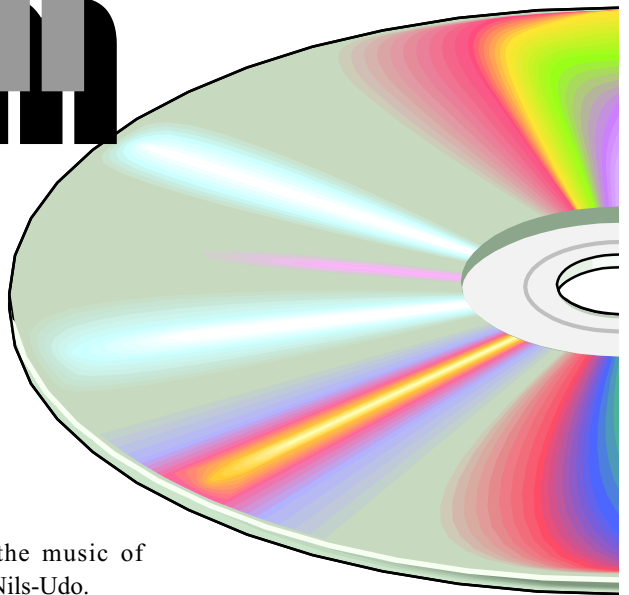
By Nick Thomson

Welcome to the September 1997 issue. This month I have included reviews of 3 of the 12 or so products that I have reviewed for InfoRom during the last month – to see the other reviews check **www.inforom.com.au**. It features reviews of educational, home reference and edutainment CD-ROM software.

The reviews are of *Eve, Preschool Success Starter,* and *Chinese Character Tutor.* Copyright for the reviews rests with InfoRom.

Eve

Eve is a fascinating and quite unique multimedia excursion through the music of Peter Gabriel and four contemporary artists. It is an 'interactive adventure' – 'Paradise has been lost. The world has turned to mud. You can travel through a mysterious, evolving landscape, creating music, experiencing art and solving riddles in search of Eve – and the return to paradise.' The program includes 80 minutes of video, 45 minutes of music and over 22,000 photographs. It is rated Mature (15 years and over) because of a certain amount of medium level animated violence. There is also a certain amount of nudity.

Eve is organised into four worlds, each one combining one of Peter Gabriel's songs with the work of one of the artists 'to create a musical and visual framework within which you can explore the music, the art and the themes that weave them together.' These worlds are as follows:

- Mud – featuring the music of *Come Talk to Me* and the art of Yayoi Kusama
- The Garden – featuring the music of *Shaking the Tree* and the art of Helen Chadwick
- Profit – featuring the music of *In Your Eyes* and the art of Cathy de Monchaux

- Paradise – featuring the music of *Passion* and the art of Nils-Udo.

Each of the worlds also has an Interactive Musical Xperience (IMX) or Musical Toy attached to it – a facility that allows you to create your own musical and visual experience – mixing backing tracks and then using icons to add instrumental and vocal tracks. Finally, you can add and take away elements from an animated video of the track you have just created – then replay the finished product. It is quite engrossing, and in the process you can get some sort of feel for what is involved in putting together a 'rock video'.

Eve is the sort of program that you can spend a great deal of time wandering through – and each time you return new experiences are possible. The quality of both sound and graphics is excellent – and the scenes are in some respects reminiscent of *Myst.* An excursion through the program might include:

- panning through the full 360 degrees of a tranquil wood scene while looking for a path to the next location
- clinching on a suitcase with a glowing orb and thereby causing a weird series of objects to appear, followed by lifelike images of a man and a woman (Adam and Eve?) – Eve walks off and Adam remains
- squelching across a middy shore towards what looks like an old wooden boat (you can almost feel the mud squelching between your toes)
- watching brief video clips of a variety of people commenting on their

experiences of relationships and being in and out of love

- theme rooms such as the one where Peter himself (or at least it looks like him) and an artist friend are sitting in a pool of chocolate – you help them converse via speech bubbles
- wandering through art galleries where you can view assembled works of the featured artists (you can only see the art works if you have collected them during your travels).

I have not the slightest understanding of the message or significance of much of the imagery, but I have been having a great time exploring, and I am enjoying the music.

The package includes a beautifully produced, full colour 58 page book. This includes introductions to and commentary on various aspects of the program; art work; notes from the artists and various 'experts' in areas like psychology and interactive entertainment; and of course some words from Peter himself. There is also a user's guide that provides (in 5 languages) a brief program outline and some generic hints.

Australian Distributor: Shock Records (Tel: 03 9482 3666) (www.shock.com.au)
Format: One Hybrid Compact Disk (Windows 95 and Macintosh)
Internet: www.realword.on.net/eve
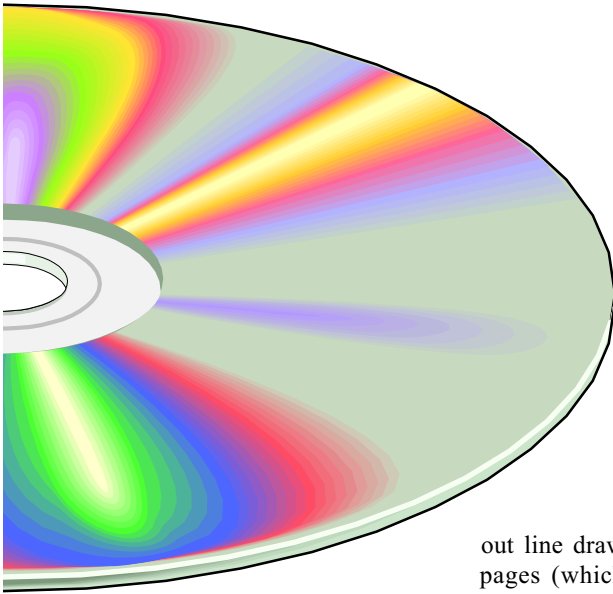
Preschool Success Starter

Preschool Success Starter is a 2 CD set that is designed to introduce 3 to 5 year old children to skills such as letters, phonics, numbers and counting, pattern recognition, matching, music and rhythm, and listening and memory. The two disks contain two separate interactive adventures:

- Maggie's Farmyard Adventure – focuses particularly on early reading, music and computer skills
- Eager's Pet Show – focuses particularly on letters, numbers, shapes and colours.

Both stories are 'Living Books', with crisp colourful screens and a wide variety of interesting sound effects. In addition, in Maggie's Farmyard Adventure users can click on objects or animals on each page to make things happen or make the animals talk. These animations are very entertaining for young users. However, in keeping with the target age group, there is no text – just dialogue and sound effects. Each disk also includes a variety of educational activities.

Maggie's Farmyard Adventure is the story of how Maggie searches the farmyard to find her lost cat, using the sound of her 'meows' to track her down. There are 5 pages of story in all, but quite a lot one can see and do on each page. At any time you can click on a help icon and Maggie will give you instructions and helpful hints, and it is possible to print out line drawing versions of any of the pages (which the young user can then colour in). Diagram 1 is an example of one of the screens.

The supplementary activities are as follows:

- Dress and Feed – dress a scarecrow by clicking on items of clothing, and feed animals by clicking on the appropriate food item
- Old MacDonald – select animals in the farmyard to fill in the missing parts of *Old MacDonald had a farm* and watch them sing along
- Keep the Beat – click the space bar at the right time to get Maggie to clap at the appropriate place in *If You're Happy and You Know It Clap Your Hands*

- Musical Kitchen – click on characters or objects to make them play music in time with some background music (thereby creating a 'kitchen orchestra')
- Pet the Cat – pet the kittens by clicking on them with your mouse (the mouse pointer turns into a petting hand).

The games are easy to play, and very entertaining – our favourite being the Musical Kitchen – the bird tweets in time, the utensils rattle, the drawers bang open and closed, the phone sings hello and so on. Toddlers love it.

There is also a 'Sing-Along' feature that allows users to sing along with 8 children's songs such as *I'm a Little Teapot* and *Itsy Bitsy Spider* (words and actions provided). These songs can also be played on an audio CD system.

Eager's Pet Show is the story of how Eager Ogre and his friends put on a pet show by finding (with the user's help) various pets scattered around the park, the town and in Eager's backyard. Once the pets have been found then they put on a show. The program is more a collection of games than a story, with one educational game per page. Instructions are available at the beginning of each activity, and it is possible to print out your own 'ogre award'. The activities each come in three levels and are as follows:
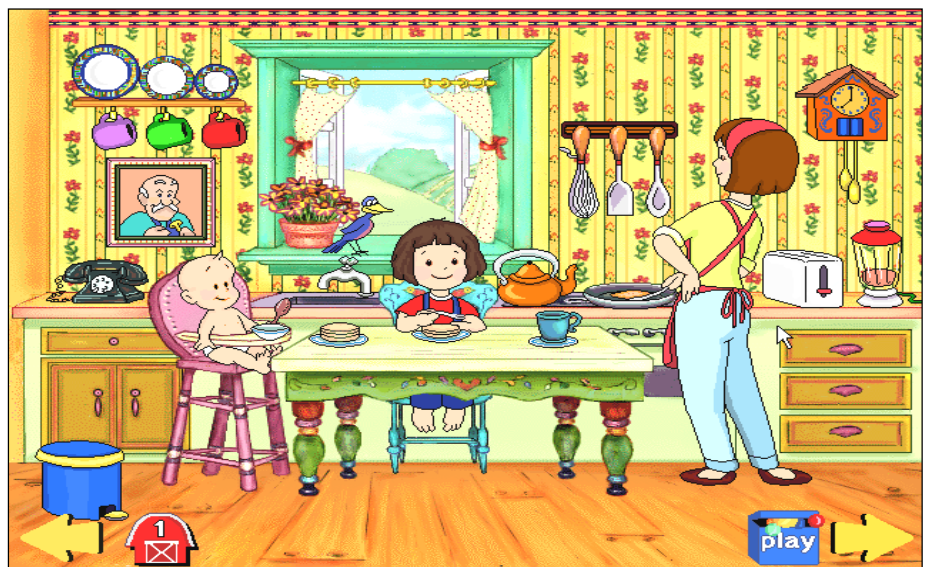
Diagram 1

Diagram 2

- Find the Dogs – practise numeral recognition and counting skills by finding the missing dogs
- Find the Cats – practise recognition of upper and lower case letters and phonics skills by finding the missing cats
- Find the Birds – practise recognition of shapes and colours by finding the missing birds
- The Dog Show – practise recognition of letters and formation of three letter words by putting on a dog show
- The Cat Show – practise number and basic addition skills
- The Bird Show – identify and arrange birds according to attributes such as colour, beak size and sounds they make.

Finally, when all the pets have been found and put on their various shows, you can put on a Grand Finale, which involves clicking on the animals to make them do funny things.

The package comes with a 60 page user's guide that provides detailed, illustrated explanations of all program features.

Australian Distributor: Dataflow (Tel: 02 9417 9700) (www.dataflow.com.au)

Format: One Hybrid Compact Disk (Windows 3.1/Windows 95 and Macintosh)

Internet: www.dataflow.com.au

Chinese Character Tutor

Chinese Character Tutor is a tutorial program that is designed to teach people how to read, write and speak Mandarin. There is particular emphasis on learning to read and write the characters used in written Chinese, and the 600 characters used in this program are derived from the revised list of 1375 Basic Characters currently in common use in the People's Republic of China. The program is in fact designed around Philip Yungkin Lee's course at the University of New South Wales – one of Australia's leading universities, located in Sydney.

The program provides interactive instruction, drilling in tone/sound discrimination, character recognition and elementary writing skills, using Pinyin, a Romanised form of Chinese used in China. Because Mandarin is a tonal language, there is particular emphasis in this program on the use of sound to drill individual characters and syllables as well as to give clear and concise models of the tonal nature of the language.

There are 6 major components in the program:

- Units
- Shuffle Test – a memorisation exercise which tests your knowledge of the correct Pinyin form for a chosen unit of characters
- Magic Squares – a memorisation exercise which teaches you to

recognise characters from aural prompts
- Radicals – a reference list of 160 radicals arranged according to stroke number
- Tone Test – an interactive exercise which teaches you to recognise the four tones used in spoken Mandarin
- Writing Tutor – an interactive exercise which teaches the fundamentals of writing Chinese characters.

The Units Module is the main feature of the program. It is organised into 20 units of 30 characters each, with one screen or card per unit. For each character one can:

- click on a picture of the character to hear its sound – spoken by both male and female voices
- play examples of the character eg for 'you' you can hear *Hello* and *You* (plural)
- play an animation that shows the sequence of strokes that make up the character
- view the 'key radical' of that character
- see the English and Pinyin versions of the character.

Diagram 2 is an example of one of the Unit screens.

Once you have worked your way through all of the 'cards' in a particular unit, then you can move on and test your skills by means of the other program components listed above. Magic Squares and Shuffle Test allow you to practise the content of the unit you are currently working on.

The screens are colourful and easy to follow, and the audio quality of the spoken sounds, words and so on is good. All in all, the program is well presented and user friendly – even to those who have absolutely no knowledge of spoken or written Chinese. It is a very useful supplement for those who wish to learn to speak or write the language properly.

It is possible to search for any word in the Units section, and there is an alphabetical index of the full 600 character set used in Chinese Character Tutor, with both English and Pinyin translations.

There is detailed online help, as well as a 150 page user's guide that includes

detailed information on all program features, an outline of the various modules and suggestions for study.

Australian Distributor: Dataflow (Tel: 02 9417 9700) (www.dataflow.com.au)
Format: One Hybrid Compact Disk (Windows 3.1/Windows 95 and Macintosh)
Internet: www.dataflow.com.au

Nick Thomson is the manager of InfoRom, a service on the Internet that reviews educational, home reference and edutainment CD-ROM software. It can be found at *www.inforom.com.au*.

A Puzzle

Solve this number sequence:

1 11 21 1211 111221

What's the next number?

Hint:
No advanced
maths skills required.

Further hints next month!
Let us know if you solve it!

The Internet Clinic

Internet Clinics are normally held at the PCUG Centre, Northpoint Plaza Belconnen the first Saturday of each month 9.30am to 1pm. There is no cost involved.

So if you (or another PCUG member you know of) are having problems you (or they) will be welcome to attend. It is suggested that you call the PCUG Centre on the day and check with the staffer that we are not overloaded before coming along.

To get a problem on your PC resolved it is essential that you bring *all* of the following items with you:

- PC and Monitor, plus all interconnecting cables
- Mouse
- Keyboard
- Modem
- Modem power supply
- Modem cables - from PC to modem and from modem to telephone socket
- Modem and PC manuals & documentation
- All of your software disks -
  i.e Win3.1. or Windows95 disks/CD

If you don't have a PC to "fix" but you want to get some guidance on some particular aspect of using TIP, please feel free to come along and simply talk to us.

Clinics are not a free software/modem installation service. We do expect you to have made a reasonable attempt at getting the software installed & working.

David Schwabe *dschwabe@pcug.org.au*

**Nhan Tran's Now Official
TIP Web Help Pages**

http://www.tip.net.au/tip/help

- What's new
  History of changes to TIP help page

- TIP Contact Details
  Phone numbers, domain, proxies, email addresses

- Useful TIP information
  Time allocation, usage statistics

- TIP documents
  Agreement, Charging Scheme, Acceptable Use Policy, Access Application

- InternetFAQ
  Answers to the Frequently Asked Questions about the Internet: what is the Internet, what you can do, netiquette

- TIP help FAQ

- Answers to the Frequently Asked Questions about various problems other people may have had with The Internet Project; your problem may not be a new one

- 'How-to' documents
  How to set up and use various programs needed to make the most of your Internet account.

- Glossary
  Translating acronyms, computer jargon, 'netese and emoticons like ;-) in plain English.

TIP Technical Information

Domain (PCUG)	pcug.org.au
Domain (AUUG)	auug.org.au
DNS server	203.10.76.34
Mail server	mailhost.**Domain**
News Server	newshost.**Domain**
ftp server	ftp.**Domain**
WWW server	www.**Domain**
Proxies	proxy.tip.net.au
	port 8080

Bits & Bytes

What if people bought cars like they buy computers? Ford doesn't have a 'help line' for people who don't know how to drive, because people don't buy cars like they buy computers. But imagine if they did...

HELPLINE: 'Ford Helpline, how can I help you?'

CUSTOMER: 'I got in my car and closed the door and nothing happened!'

HELPLINE: 'Did you put the key in the ignition and turn it?'

CUSTOMER: 'What's an ignition?'

HELPLINE: 'It's a starter motor that draws current from your battery and turns over the engine.'

CUSTOMER: 'Ignition? Motor? Battery? Engine? How come I have to know all of these technical terms just to use my car?'

HELPLINE: 'Ford Helpline, how can I help you?'

CUSTOMER: 'My car ran fine for a week, and now it won't go anywhere!'

HELPLINE: 'Is the petrol tank empty?'

CUSTOMER: 'Huh? How do I know?'

HELPLINE: 'There's a little gauge on the front panel, with a needle, and markings from 'E' to 'F'. Where is the needle pointing?'

CUSTOMER: 'I see an 'E' but no 'F'.'

HELPLINE: 'You see the 'E' and just to the right is the 'F''

CUSTOMER: 'No, just to the right of the first 'E' is an 'R'.'

HELPLINE: 'An 'R'?!?'

CUSTOMER: 'Yes. 'L', 'A', 'S', 'E' ...'

HELPLINE: 'No, no, no sir! That's the front of the car. When you sit behind the steering wheel, that's the panel I'm talking about.'

CUSTOMER: 'That steering wheel thingy – is that the round thing that honks the horn?'

HELPLINE: 'Yes, among other things.'

CUSTOMER: 'The needle's pointing to 'E'. What does that mean?'

HELPLINE: 'It means that you have to visit a petrol vendor and purchase some more petrol. You can install it yourself, or pay the vendor to install it for you.'

CUSTOMER: 'What? I paid $25,000 for this car! Now you tell me that I have to keep buying more components? I want a car that comes with everything built in!'

HELPLINE: 'Ford Helpline, how can I help you?'

CUSTOMER: 'Your cars suck!'

HELPLINE: 'What's wrong?'

CUSTOMER: 'It crashed, that's what went wrong!'

HELPLINE: 'What were you doing?'

CUSTOMER: 'I wanted to go faster, so I pushed the accelerator pedal all the way to the floor. It worked for a while, and then it crashed -and now it won't even start up!'

HELPLINE: 'I'm sorry, sir, but it's your responsibility if you misuse the product.'

CUSTOMER: 'Misuse it? I was just following this damned manual of yours. It said to make the car go, put the transmission in 'D' and press the accelerator pedal. That's exactly what I did - now the damn thing's crashed.'

HELPLINE: 'Did you read the entire operator's manual before operating the car, sir?'

CUSTOMER: 'What? Of course I did! I told you I did EVERYTHING the manual said and it didn't work!'

HELPLINE: 'Didn't you attempt to slow down so you wouldn't crash?'

CUSTOMER: 'How do you do THAT?'

HELPLINE: 'You said you read the entire manual, sir. It's on page 14. The pedal next to the accelerator.'

CUSTOMER: 'Well, I don't have all day to sit around and read this manual you know.'

HELPLINE: 'Of course not. What do you expect us to do about it?'

CUSTOMER: 'I want you to send me one of the latest versions that goes fast and won't crash anymore!'

HELPLINE: 'Ford Helpline, how can I help you?'

CUSTOMER: 'Hi! I just bought my first car, and I chose your car because it has automatic transmission, cruise control, power steering, power brakes, and power door locks. How do I work it?'

HELPLINE: 'Do you know how to drive?'

CUSTOMER: 'Do I know how to what?'

HELPLINE: 'Do you know how to DRIVE?'

CUSTOMER: 'I'm not a technical person! I just want to go places in my car!'

Contributed by Iain Gould

Dear Abby

I am a Vietnam-era deserter from the US Army, and I have a second cousin who works for Microsoft. My mother peddles Nazi hate literature to Girl Scouts and my father (a former dentist) is in jail for 30 years for raping most of his patients while they were under anaesthesia. The sole supporters of our large family, including myself and my $500-a-week heroin habit, are my uncle (master pick-pocket Benny 'The Fingers') and my aunt and kid sisters, who are well-known street walkers.

My problem is this: I have just got engaged to the most beautiful, sweetest girl in the world. She is just sweet sixteen, and we are going to marry as soon as she can escape from reform school. To support ourselves, we are going to move to Mexico and start a fake Aztec souvenir factory staffed by child labour. We look forward to bringing our kids into the family business. But – I am worried that my family will not make a good impression on hers, once she has a chance to meet them.

In your opinion, Abby: should I – or shouldn't I – let her know about my second cousin who works for Microsoft?

Regards
Troubled
Contributed by Peter Tillbrook

Survey '97 Results

by Ken Livingston

he last membership survey was conducted several years ago, even prior to the acquisition of the premises in Fyshwick. Since that time, the group has undergone significant changes. The present survey was conducted in an effort to ascertain how attitudes of the membership may have changed subsequent to the last survey.

Survey '97 Sweepstakes

Congratulations to Wolf Lieske for winning the survey drawing!

The Response

417 members, representing about twelve per cent of our total membership, responded to the survey that was published in the June 1997 issue of *Sixteen Bits.* Now, while twelve percent is a statistically meaningful, healthy sample, one might wonder why the remaining eighty-eight percent chose not to respond. We can only speculate, trusting that it's more a matter of simple laziness than of abject apathy.

77.0 % have TIP accounts.
21.5 % have commercial ISP accounts.
13.0 % have both TIP and commercial ISP accounts.
78.5 % have visited the PCUG Centre in the past year.
17.5 % currently volunteer time to help other members.
66.0 % are **willing** to volunteer time to help other members
58.5 % would agree to be rostered to provide volunteer assistance.

Who are the respondents?

Surprisingly, just eight percent of respondents are women. Similarly, few respondents are under thirty years of age. The average respondent has attended university and lives in a household with 1.9 computers. Over half of all respondents are interested in bush walking.

Development Issues

This section of the survey dealt mainly with questions of funding and staffing. The responses clearly indicate that members do not wish the group to move towards greater commercialisation. There is no particular consensus as to the meaning of the term 'commercialisation', but nearly everyone agrees that it is a Bad Thing. Respondents do not favour moving to a user pays basis for the provision of services. There is no mandate, however, against employing paid staff or outsourcing, provided that designated tasks cannot be carried out on a voluntary basis. Not surprisingly, most respondents feel that the core purpose of the group revolves around the 'users helping users' slogan.

PCUG Benefits and Services

Respondents rated twenty group benefits and services on a scale of 1–5, with 5 being the most important. Below are the results in order of overall ranking (*tie).

Conclusions

Steady as she goes! Proceed with extreme caution into commercial ventures. Keep prices at a reasonable level without sacrificing quality of service.

Look for further analysis and more survey results in upcoming issues of *Sixteen Bits*.

The respondents

Age	% of total respondents
under 18	2.5 %
19 – 25	2.5 %
26 – 30	3.0 %
31 – 40	14.5 %
41 – 50	27.5 %
51 – 60	27.5 %
61 – 70	14.5 %
over 70	8.0 %

PCUG benefits and services

Rank	Service	Mean Score
1	Sixteen Bits Magazine	4.170
2	Internet Access (TIP)	4.135
3	Contact with other users	3.505
4	Training Courses	3.435
5	Help Directory	3.175
6	Vendor Discount Scheme	2.965
7	Government Lobbying	2.860
8	Bulletin Board Service	2.765
9	Community Service / Info	2.635
10	Main Monthly Meetings	2.640
11	Special Interest Groups	2.595
12	Shareware Catalogue	2.425
13	Software Library	2.365
14	Modem Sales	2.320
15*	Special Events / Social	2.245
15*	Shareware Registration	2.245
16	New Members Nights	2.120
17	Disk & Tape Sales	1.875
18	Hardware Library	1.785
20	Paperware Library	1.630

Dream Machine

by Chess Krawczyk
Consulting Philosopher
ckrawczy@pcug.org.au

Choosing or upgrading to a Pentium

I have been upgrading PCs since my first IBM PC twin floppy system in 1981 and have now faced up to a PENTIUM upgrade. My criteria are to build a machine that will not be obsolete in 2 years, can be upgraded for speed and multi media performance – and all on a small budget.

The only combination to meet these requirements is a 233 MHz Pentium II processor on a 440LX Chipset motherboard with 32 MB EDO DRAM on more than 4 sockets, more than 4 x PCI slots, 2 x DMA33 EIDE connectors with SCSI peripherals. I rejected all other models of PENTIUM chips as already being obsolete by having no upgrade path past August 1997.

Motherboard – CPU Processor

Knowing that I wanted a PENTIUM, I thought the choice was simple – Pentium, Pentium Overdrive, with MMX, Pentium Pro or PENTIUM II, or AMD, CYRIX, or IBM lookalike. Some dealers could not tell me the difference, others invented the Pentium Pro 2 P6 and tried to confuse me. The criterion is simple: the CPU *socket* on the motherboard determines any future upgrades (see **Table 1** below).

The future is the **SEC Slot 1** which only takes a PENTIUM II and future processors, and makes *all* other sockets and therefore motherboards obsolete.

Currently PENTIUM II processors are available in 233, 266 and 300 MHz (see **Table 2** below).

Chipsets

The functional capability of a motherboard is determined more by the *chipset* than just by the CPU. Here is a generation of chipsets (see **Table 3** next page).

Intel was expected to announce the 82440LX Chipset on 26th August 1997, which is expected to have the following features:

1. Advanced Graphics Port (AGP) – separate link from the graphics card to the processor, leaving the system bus free and allowing system memory (RAM) to be used for the graphics card if needed. Data transfer to graphics up to 400 Mb per second.
2. Currently the 440FX supports a PCI bus speed of 66 MHz, while the 440LX is expected to have a 75, 80 or even 100 MHz PCI bus.
3. SDRAM is four times (4X) faster than DRAM; 15 ns instead of 60 ns. (see below).

4. ULTRA DMA support for up to 33 Mb per second transfer rate for EIDE devices instead of the standard 11 Mb per second IDE.

This is worth waiting for, with new motherboards expected to be released in September 1997.

Memory

30 pin SIMMs are rare, expensive and no longer desirable! 168 pin DIMMs are not supported on 440FX motherboards that I have seen reviewed, so 72 pin SIMMs remain the choice for the future.

The number of SIMM sockets on Pentium motherboards varies from four to six or eight sockets – MORE is better.

Under Windows 95 on a 200 MHz Pentium, increasing RAM from 16 Mb to 32 Mb gives a 20% increase in performance; from 16 to 64 Mb gives a 33% increase in performance.

Note that different chipsets (above) support from 128 Mb to 512 Mb of RAM and also vary the amount of paging supported. (Check *www.intel.com* or *www.kingston.com*).

So 32 Mb is a good start. Note the voltage differences from 5v to 2.5v above – don't fry them chips!

Table 1

Slot 1 (Single Edge Contact)	2.8v	5.5 x 2.4 in	PENTIUM II
Socket 8	2.5v	387 pin	Pentium Pro MMX
Socket 7	2.5/3.3v	321 pin	75, 90, 100 MHz with MMX
Socket 5	3v	320 pin	75, 90, 100 MHz
Socket 4	5v	273 pin	60 or 66 MHz

Table 2

	CINT95	CFP95
Pentium 100	3.33	2.04
Pentium 200	5.17	3.14
Pentium II 233	9.13	5.91
Pentium II 266	10.4	6.36

Table 3

450LX	Orion/Mars TBA	TBA SDRAM	Sept 1997
440FX	Natoma	Pentium Pro, II	Limited
430TX	?	MMX, DPMA, Ultra DMA, SMBus	Multi media, 3D CAD
430VX	Triton 3	USB, SDRAM, Concurrent PCI	Business machine
430HX	Triton 2	Opt EDO, Concurrent PCI	Home user
430FX	Triton 1	EDO, PCI stream, SDRAM	Workstation, servers

SIMMs contain many DRAM chips in a 72 pin connector, the most common being FPM: Fast Page Mode, which uses caching type addressing to increase access time.

EDO (Extended Data Output) Memory with L2 cache is up to 50% faster than FPM memory (see **Table 4**).

Upgrading from **EDO** to **BEDO** (Burst EDO) or **SDRAM** (Synchronous DRAM) gives another 50% increase in performance (almost fast enough!). BEDO DRAM is an interim patch until SDRAM becomes the common memory for all computing. SDRAM is not currently supported on the 440FX, but will be on the 440LX.

Slots

Concurrent PCI is the way to go so maximise the number of slots and reduce the number of ISA slots. There are a few boards with EISA and PCI – but why? Beware – many motherboards have an ISA and a PCI slot so close together that they share real estate space and only one or other can be used. There is a major difference in the IDE and EIDE support on motherboards. Two IDE connectors are common on many boards for four EIDE/IDE devices. Forget Bus Master IDE PIO mode 4 and DMA mode 2 and go for DMA33 for 33 Mb per second EIDE support.

Peripherals

Ultra Fast Wide SCSI, hard disks, 24x CD-ROM, 56Kbps modems, and video cards are all extra and need their own article – not to mention back-up systems for those gigabytes on disk with ZIP, JAZ, DAT, magneto-optical floppies, CD-ROM and now DVD.

Conclusion

I actually went three times into one dealer, the last time with money in hand, to buy a 233 MHz motherboard with 440FX chipset. The going price was $1,400 to $1,600 for names like INTEL, TYAN, SUPERMICRO. The dealer kept giving me the run around: no technical spec sheet, a verbal description only, a handwritten, variable quotation on the back of a business card. So I have decided to wait for the ULTIMATE – the **440LX!**

Once my system is up I will run performance tests and report in a letter to the Editor, or post it on my home page. Meanwhile, I am loading my software onto the 486 desktop, whose disks I am going to re-use, and transferring data from my notebook in anticipation. Hopefully, well before Christmas.
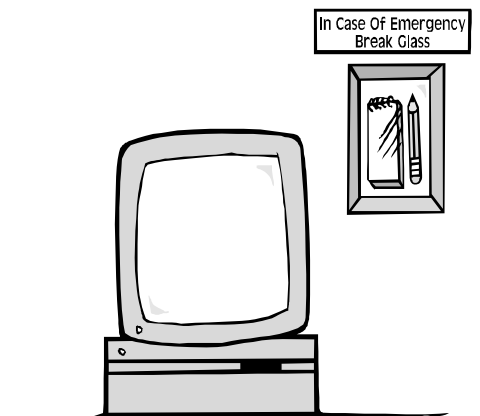
Table 4

	FPM	EDO	BEDO	SDRAM
Access Time	50,60,70	50,60,70	50,60,70	50,60,70
Cycle Time	30,35,40	20,25,30	15,16.6,20	**10,12,15**
Max Speed MHz	33,28,25	50,40,50	66,60,50	100,80,66

< HTML >
A beginner's guide

by Greg Baker
The second module of a short course begun last month on HTML.

EXERCISE 8

Return to your exercise file and insert the title 'Stop Mousing About! - Microsoft Excel 5.0 Keyboard Shortcuts' into the head section of the HTML code.

Save the file, switch to Netscape and reload it.

Notice that the title has now appeared in the Netscape title bar.

To see a completed version of this exercise see c:\inet\nom8_6.htm when you have finished.

3.07 Comments

All HTML code that is not completely transparent should be commented.

Comments appear thus

<!— This is a comment —>

Take care when you comment code to choose language that is appropriate for others to read. At least one web browser is reported to have a bug in it that has the effect of displaying code comments along with the formatted text.

Also note that your code can be read by anyone with a web browser by viewing your source code. For details on how to read HTML source code within Netscape see *Viewing source code in Netscape* earlier in this course.

EXERCISE 9

Alt+Tab switch to your other version of Notepad which will still have text2.htm open.

Examine the form of the comment in the HTML source code.

Note that comments can also be used to temporarily remove code rather than deleting it during testing.

3.08 Lists

Often you will want to present information in the form of a list. In HTML there are several forms of lists.

The most common lists are *unordered* lists and *ordered* lists.

<UL></UL>

Delimits an unordered list of items. Each list item is indicated by a bullet. The form of the bullet depends on the browser. Each item in the list needs to begin with an <LI> tag.

<OL></OL>

Delimits an ordered list of items. Each list item is indicated by a numeral, beginning with 1 for the first item. Each item in the list needs to begin with an <LI> tag.

<LI>

Indicates a list item. Most browsers assume a list item ends with the beginning of the next list item or the end of the list. Hence the closing tag </LI> is not usually needed.

Again it is a good idea to consider indenting your code as in the examples which follow.

HTML code for an unordered list looks like

Shopping list
<UL>
 <LI>Bananas
 <LI>Coconut
 <LI>Ghee
 <LI>Pappadums
</UL>

HTML code for an ordered list looks like

Asimov's three laws of robotics:
<OL>
 <LI>A robot may not injure a human being or through inaction allow a human being to come to harm.
 <LI>A robot must obey the orders given to it by human beings except where such orders would conflict with the first law.
 <LI>A robot must protect its own existence as long as such protection does not conflict with the first or second laws.
</OL>

Sub-lists can be achieved by nesting lists thus

Shopping list
<UL>
 <LI>Fruit
 <UL>
  <LI>Bananas
  <LI>Apples
  <LI>Grapefruit
  <LI>Oranges
 </UL>
 <LI>Vegetables
 <UL>
  <LI>Carrots
  <LI>Potatoes
  <LI>Peas
 </UL>
</UL>

Note that as a default ordered sub-lists also begin with the numeral 1.

Note also that there are a number of variations that can be coded where the result on the output page depends on the browser. Such variations include upper

and lower case Roman numerals and upper and lower case alphabetic characters; beginning with any character and numeral; and carrying on a previous sequence.

Take care in using these extensions because not all browsers will be able to correctly interpret your code.

EXERCISE 10
Alt+Tab back to your example file in the other instance of Notepad. If you have not finished your work you can open c:\inet\nom8_6.htm and work on this file.

Reformat the keyboard shortcuts as an unordered list.

Save the file and check your code in Netscape.

Consider indenting your code.

To see a completed version of this exercise see c:\inet\nom8_7.htm when you have finished.

3.09 Tables
HTML is in the process of standardising features to incorporate tables into code. HTML 2.0 does not include tables but the proposed HTML 3.2 has a capacity to code tables for inclusion in your Web pages. However depending on the size and complexity of the table it can be tedious to code in HTML.

<TABLE> </TABLE>
Delimits a table definition.

<TR>
Indicates the beginning of a row of a table. The tag </TR> is not needed.

<TH>
Indicates the beginning of a table row or column heading. Such table headings are strengthened. The tag </TH> is not needed because browsers assume that the table heading has finished when they encounter a new table cell, the beginning of another table row or the end of the table.

<TD>
Indicates the beginning of the contents of a table cell. The tag </TD> is not needed because browsers assume that the cell data has finished when they encounter the beginning of the data for a new table cell, the beginning of another row or the end of the table.
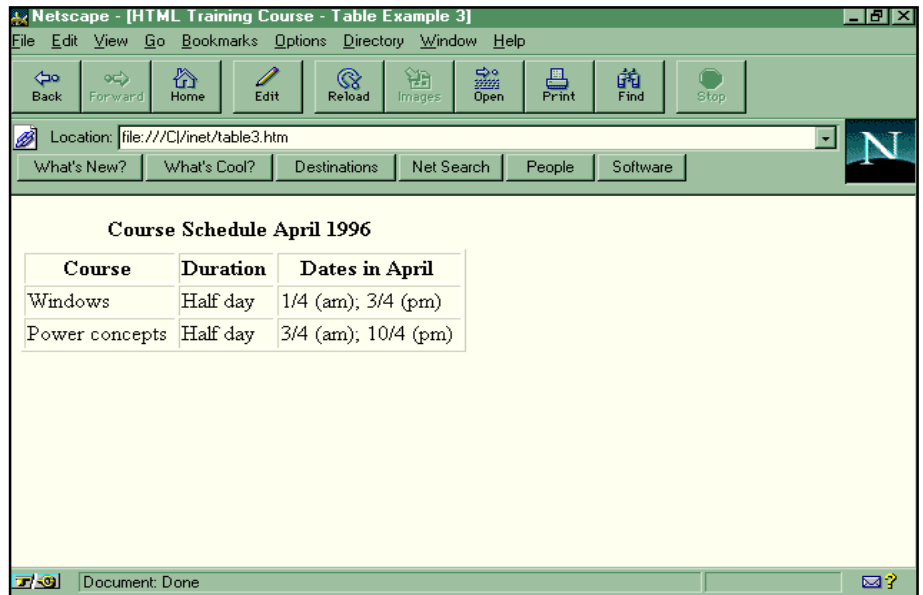
Exercist 13 - table borders

All tables must begin with <TABLE> and end with </TABLE>.

All rows must begin with a <TR> tag.

Every cell in every row must be coded with either a heading—<TH>—or data—<TD>.

Thus to code the simple table

```
Course      Duration      Dates
HTML        Half day      1 April
VB4         Full day      3 April
```

use:
```
<TABLE>

<!— First row = 3 headings —>
<TR>
<TH>Course
<TH>Duration
<TH>Dates

<!— Second row = 3 data items —>
<TR>
<TD>HTML
<TD>Half day
<TD>1 April

<!— Third row = 3 data items —>
<TR>
<TD>VB4
<TD>Full day
<TD>3 April

<!— Indicate end of table —>
</TABLE>
```

EXERCISE 11
Open c:\inet\table1.htm in Notepad to view the above HTML code.

Switch to Netscape to view the page as it appears to a reader.

Note that although this table coding works it does not produce a table which is particularly aesthetically pleasing. For example note that the headings are centre justified and the data items are left justified.

There are a number of ways to improve the appearance of the final table.

One way is to include a table caption.

Another way may be to include border lines between cells.

Yet another way may be to use within HTML tags what are known as *attributes*.

These are now discussed in turn.

Table captions
Tables can be captioned with the caption option.

<CAPTION> </CAPTION>
Display enclosed text as a table caption.

Note that the caption must lie within the table definition, that is, within the <TABLE> </TABLE> pair.

For example a caption can appear as

```
<TABLE>
<CAPTION>
Table Caption
</CAPTION>

<!— Extra HTML table code here —>

</TABLE>
```

EXERCISE 12

Open c:\inet\table1.htm again and include the caption *Training Course Schedule April 1996.*

Save your code and switch to Netscape and reload it to see the effect.

Note that the caption does not appear strengthened on the output page.

Strengthen the caption with <STRONG> </STRONG> tags.

Save this code and check its effect on the output page in Netscape.

Open c:\inet\table2.htm to see this code implemented.

Cell borders

At the most basic level cell borders can be included by

```
<TABLE BORDER>
```

The BORDER attribute includes a border around all cells of the table. Note that this tag replaces the standard <TABLE> tag and that the BORDER attribute should not be repeated in the closing tag </TABLE>.

EXERCISE 13

In Notepad modify c:\inet\table1.htm or c:\inet\table2.htm to include a border.

Save the file and switch to Netscape to observe the effect on the output page.

The implementation of this code is in c:\inet\table3.htm.

Attributes

Standard HTML has a number of approved attributes for many of the HTML tags. The writers of web browsing software have included a range of their own.

The difficulty in using Netscape extensions, for example, to standard HTML is that they will mainly be only able to be interpreted properly by Netscape browsers. This means that at best people with other browsers will not get the full benefit of your coding effort and at worst will get pages which are aesthetically unpleasing or confusing.

In this course we are using only standard HTML 2.0.

One attribute was the BORDER attribute given above.

Other HTML 2.0 attributes for the table tags can be located through web pages such as that given at *Further assistance* above.

3.10 Preformatted text

For long text documents and for complex tables the time involved in inserting HTML tags can be significant. At the expense of some aesthetic appeal it is possible to preformat ASCII text in a text editor and ask web browsers to print that preformatted text as they find it.

```
<PRE> </PRE>
```

Display enclosed text exactly as it appears in the HTML code. Note that most HTML tags enclosed within <PRE> </PRE> tags still function as normal.

<PRE> </PRE> has the disadvantage for plain text that the output appears in a monospaced font. This is not as aesthetically appealing as the proportionally spaced fonts that text such as this article is printed in.

However this becomes an advantage when it comes to tables. As outlined above the table feature of HTML can be tedious to code. The way to avoid this tedium is to use preformatted text.

In addition preformatted text can be interpreted and displayed much faster than standard HTML coded text.

EXERCISE 14

Open the file c:\inet\table4.htm in Notepad and examine the code.

Switch to Netscape and load this file.

Note that—as expected—the formatting has disappeared.

Now in Notepad type <PRE> before the table and </PRE> after the table.

Save table4.htm, switch to Netscape and load the file.

Note the monospaced font and the fact that all prior formatting has been retained.

3.11 Anchors

A key feature of HTML is the ability to identify a section of text or a graphic image as a hyper-text link. These links can be to other parts of the current page or to other pages anywhere on the web.

These anchors take two forms corresponding to links within the page and links to other pages.
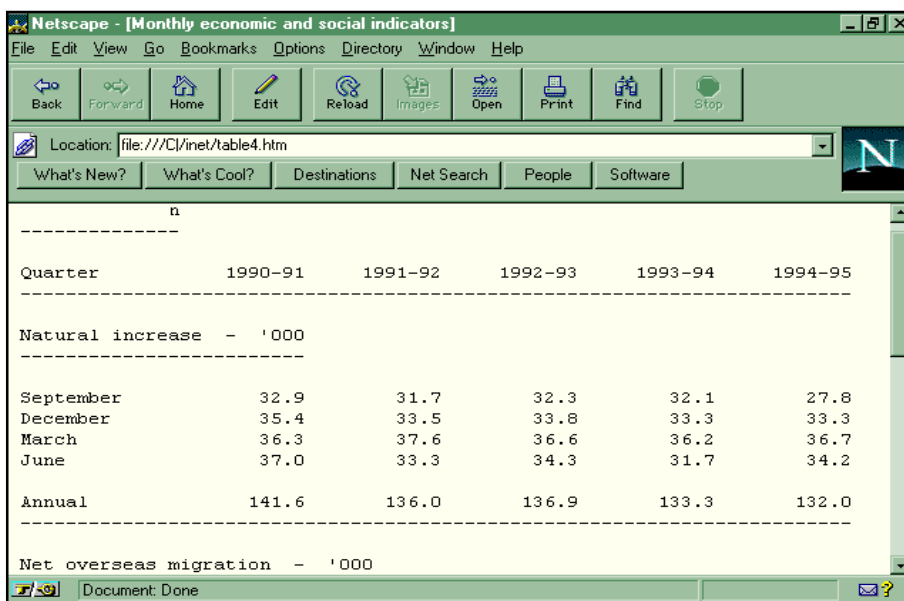
Exercise 14 – preformatted text

Links within current page

Links to other parts of the current page have the form

<A HREF = "#*target*"> </A>

Provides a link to line labelled *target* in current page.

When the reader clicks on the text enclosed within these tags the part of the page displayed jumps so that the line labelled *target* is the topmost line. If this line is near the end of the page the browser will provide a full screen with the linked line as near the top of the screen as it is able.

The place in the current page that such a link jumps to is labelled

<A NAME = "*target*"> </A>

Target of hypertext link within the current document.

This type of link is useful for large documents which can be provided with a contents list or with the ability to quickly jump from the bottom to the top.

For example a contents list might look like

```
<STRONG>
CONTENTS
</STRONG>
<P>

<A HREF = "#SECTION1">
<STRONG>Section 1
</STRONG>
</A>
<BR>
<A HREF = "#SECTION2">
<STRONG>
Section 2
</STRONG>
</A>
<BR>
<A HREF = "#SECTION3">
<STRONG>
Section 3
</STRONG>
</A>
<BR>
```

and the target sections labelled thus

```
<A NAME="SECTION1">
<STRONG>
Section 1
</STRONG>
</A>
```

Note that using these tags does not automatically insert a line break. The advantage of this is that such links can be inserted within paragraphs without altering the flow of text.

For example

The standard restaurant table provides a range of facilities for clients to use. These facilities usually include a
```
<A HREF = "#SALT">
salt shaker
</A>
and a
<A HREF = "#PEPPER">
pepper shaker.
</A>
and
<A NAME = "SALT">
Salt Shaker
</A>

<A NAME = "PEPPER">
Pepper Shaker
</A>
```
Note that it is not necessary to provide spaces before or after the anchors in the example above.

EXERCISE 15
Open c:\inet\links2.htm in Netscape to see the effect of the above example.

Notice that as you pass the mouse pointer over text highlighted as links the target address appears in the status line at the bottom of the screen.

EXERCISE 16
In Notepad open c:\inet\links1.htm and examine the HTML code.

Switch to Netscape and load this document.

Test the links.

Notice the use of a link from the bottom of the document to the contents list at the top.

EXERCISE 17
In Notepad return to your exercise or open c:\inet\nom8_7.htm.

Insert a link from the bottom of the document to the top of the list of shortcuts.

To see a completed version of this exercise see c:\inet\nom8_8.htm when you have finished.

Links with pages elsewhere on the web

Links to other pages on the web have the form

<A HREF = "*TargetURL*"> </A>

Provides a link to page with Uniform Resource Locator *TargetURL*.

Uniform Resource Locators (URLs) are the addresses that are used on the web to identify particular pages.

A link to another page may look like

<A HREF = "http://www.xxx.com/index.htm">
XXX Corporation Home Page
</A>

Note that *http* stands for hyper-text transfer protocol. It is one of a number of options in this position.

EXERCISE 18
Open c:\inet\links3.htm in Notepad to see how links to pages at other sites on the web are coded.

Notice how a commentary on the web pages pointed to with these links can be included in the HTML code.

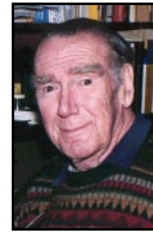**Switch to Netscape and load the file to see how this looks on screen.**

Although the technique used here is quite straightforward, URLs are often quite complex and need to be accurately coded

(to be continued ...)

Software Library

Phil Trudinger

NEW AND UPDATED WINDOWS PROGRAMS

(An asterisk denotes Windows 95 specificity or compatibility)

CARDS AND LABELS

ANYLABEL
AnyLabel for Windows 1.11 is a powerful WYSIWYG label design package. Features include over 1700 predefined label formats, support for all standard bar-code types, support for 21 different graphic formats, and TWAIN scanner support. You can import data from dBASE, Clipper, FoxPro, CardFile, and ASCII text files. Reg Fee $59

BCDPLS
Business Card Designer Plus for Windows 3.76A allows you to easily create personalised business cards on any laser printer. You can include rotated text, lines, boxes, circles and clip art on the cards. Other features include WYSIWYG formatting, 'click and drag' sizing, full clipboard support, print preview screen, the ability to print one card or an entire sheet of cards, and more. Reg Fee $2

CARDSM28
Cards+More 2.80 is an easy-to-use system for designing and printing mailing labels, business cards, and diskette labels. Features include support for 10 different graphics formats, bar code printing, a snap-to grid, auto numbering, 180-degree text rotation, and much more. Reg Fee $29

PSLB11*
PrimaSoft Label Printer 1.10 is a flexible utility for printing labels for Win95/NT with support for most common Avery labels. The Print Preview function allows you to see on-screen exactly how labels will look when printed. Data for labels can be imported from standard text files. Reg Fee $20

VL20B16 (Win31)
VL20B32 (Win95)*
Visual Labels is an easy-to-use label design and printing package which allows you to create an unlimited variety of labels using text, pictures, boxes, ovals, lines, counters, and patterns in any font, colour, or rotation. This includes a comprehensive database of Avery label and business card templates. Reg Fee $20-$43

COMMUNICATIONS

BROWSE11
Browse and View 1.10.16 is an off-line Web browser that enables you to distribute your HTML Web pages on a diskette. Reg Fee $36

CBM29
Columbine Bookmark Merge 2.9 is a Netscape and Microsoft Internet Explorer accessory for merging, editing, sorting and converting bookmark, favorites, and HTML files. Reg Fee $various

CNOTIF10
Chat Notifier 1.0 advises you when somebody wants to talk to you on an IRC chat line but you are doing something else in another application or chatting in another room. Reg Fee $15

COMPS201
Compass 2.01 is a powerful Netscape bookmark file editor. Features include colour coding, a variety of sorting options, the ability to import/export a hotlist, easy description editing, and much more. Reg Fee $25

FTPZ
FTP Explorer 1.009 is a versatile and powerful, yet easy to use FTP program. FTP Explorer is a 32-bit FTP application that makes moving files between the Internet and your computer as simple as local file manipulation. Reg Fee $0-$30
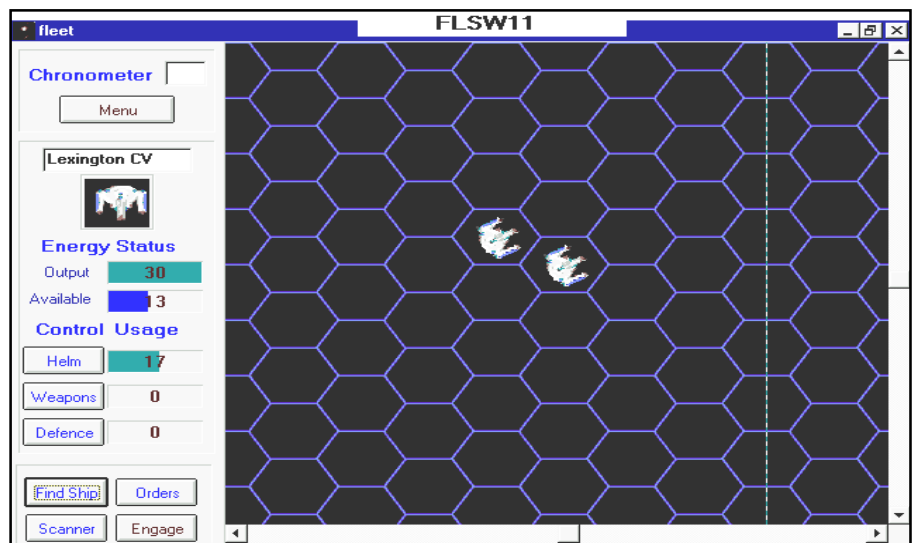
HIST200*
Histopic 2.02 maintains a history of all the file names you have downloaded from the Internet. This is a valuable tool that helps you avoid downloading files you have previously retrieved. Requires Win95. Reg Fee

JTF20H16 (Win31)
JTF20H32 (Win95)*

Just The Fax 2.0h-so-easy-to-use personal fax program with a WYSIWYG fax and cover sheet editor. Features include the ability to create unlimited cover sheet templates, the ability to spell check fax documents and cover sheets, an unlimited phone number database, and more. Reg Fee $20

WBX31203 (Win31)
WBX95203 (Win95)*

WebExpress 2.03 is a WYSIWYG web page creation package that allows you to design, edit and maintain your site in a familiar word processor-like environment. This includes support for frames, forms, face extensions and more. Reg Fee $70

GAMES

BEARLAND

BearLand 1.0 is an amusing adventure game for Windows where you explore a fantasy land looking for the key to unlock the royal safe. Along the way you will meet a few unusual people, including a wizard and a witch. If you are lucky enough to find the map, it may help you through the BearLand maze. A MIDI soundtrack and digitised voices and sound effects add to the fun. Reg Fee $?

DEBRIS

Debris is a fantastic shoot-em-up arcade game where you use your spaceship to clear each level of asteroids. As you blast away, special power-ups give you more powerful weapons. The beautifully rendered 3-D graphics and MIDI soundtrack are very well done. Reg Fee $24

FLTSW11

Fleet Technical Combat Simulator 1.1 is a simulation of starship combat in the 22nd century. The sequence of play for each turn consists of orders, movement determination, and weapon firing. You can play against the computer or a human opponent. Reg Fee $20

GBINSTAL

Gravityball 1.3 is an unusual game in which the player uses cleverness and creativity to devise an 'arena' which delivers a ball from the start tile to the finish tile in the most creative and entertaining way. Points are awarded for completing various tasks along the way. Reg Fee $10
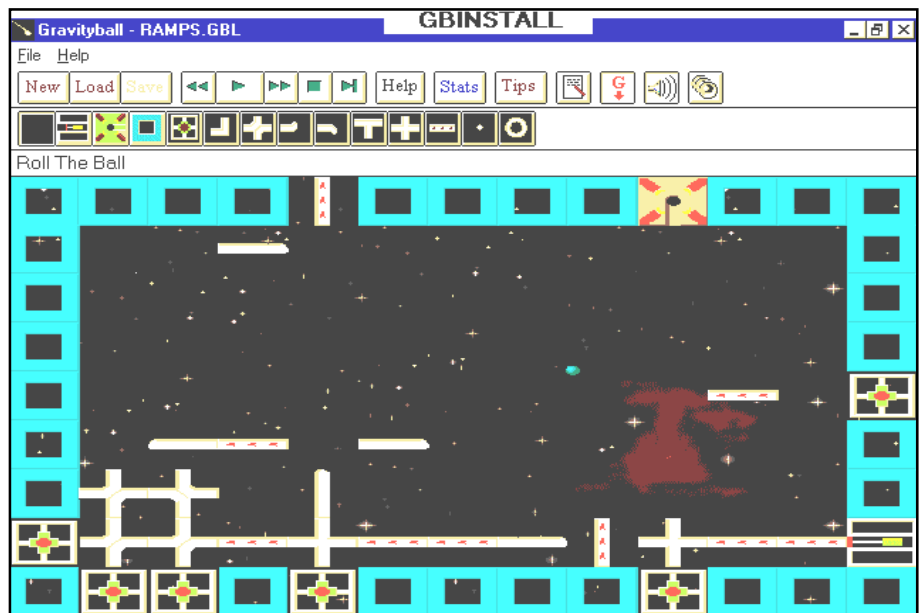
HEARTS

MVP Hearts for Windows 1.3 lets you play a challenging game of Hearts against a variety of colourful computer opponents. Features include excellent graphics and music, the ability to customise the rules of play, support for multi-player games over the Internet, the ability to change background textures and text colours, and more. Reg Fee $32

S_TYCOS

Space Tycoon 1.0 is a board game where you move your space ships around the playing board, buy and sell properties, and do your best to drive the computer's players bankrupt. There are unpredictable events, uprisings, taxes, a Federal agent and more to look out for, and keep an eye on your fuel gauge. Reg Fee $15

UNCL_JUL

Uncle Julius and the Anywhere Machine 1.01 is a graphical adventure game in which you explore and solve puzzles. In this game, Uncle Julius is trapped in another dimension and is counting on you to rescue him. This is a challenging game appropriate for both children and adults. Requires 486+, 11 MB HD space, 8 MB RAM, 256+ colours. Reg Fee $19

GRAPHICS

ACDC1615 (Win31)
ACDC3221 (Win95)*

ACDSee 1.5 is a fast JPEG, GIF, BMP, PCX and TGA graphics viewer. Features include rapid decompression, the ability to view the image as it is being decompressed, image panning during decompression, support for 256 to 16 million colour modes, and support for most JFIF compliant image files. Reg Fee $18

ANIMAL21

ESF's Animal Clip Art Collection 2.1 contains 30 colour PCX images of a variety of animals including cardinal, duck, eagles, owl, pheasant, cat, retriever, dachshund, marlin, crayfish, bear, beaver, cow, leopard, deer, monkey, moose, and more. Reg Fee $25

EZVIEW16 (Win31)
EZVIEW32 (Win95)*

EZ-Viewer 1.0 allows you to quickly and easily view and manipulate graphic files. This supports many popular graphic formats, including JPG, GIF, BMP, TIF, ICO, and WMF. Other features include the ability to browse all files in a directory, thumbnail view, printing facilities, the ability to zoom in/out, resize options, and more. Reg Fee $29-$39

GRAPHW

Graph Wizard 1.0 will create 2D and 3D graphs (area, surface, tape, scatter, bar, pie, line, bubble, polar, high/low, candlestick, box-whisker, time liner and gantt). These images can be printed in black and white or colour. The images can also be saved to bitmap files (BMP); you can then use these images in a slide show or overhead presentation. Reg Fee $29

GVPD35

Graphics VP Deluxe 3.5 helps you view, print, acquire, convert, and resize picture files in Windows. It supports class conversion and file compression, and includes a gallery thumbnail utility. This supports BMP, PCX, TIF, GIF, JPG, PIC, RAS, TGA, PCD, FLT, CUT and more. Reg Fee $15-$20

IVIEW225*

IrfanView32 2.25 is a fast image viewer/converter for Win95/NT. Supported file formats include JPEG, GIF, BMP, DIB, RLE, PCX, PNG, TIFF, TGA, RAS, ICO, AVI, WMF, EMF and Photo-CD. Other features include drag and drop support, fast directory viewing, a print option, and more. Reg Fee $0

PAPER16 (Win31)
PAPER32 (Win95)*

Paper-Folding-Fractals 97.05 allows you to create billions of different fractals that form from repeated patterns of paper folding. Most of these fractals have not yet been constructed, and no one knows what they will look like. It also provides a step-by-step explanation of a particularly famous paper folding fractal called the Dragon. Reg Fee $18

MATHS

ECDSETUP*

Essential Calculators for Win95 provides an assortment of financial calculators, including a savings calculator, a retirement calculator, a loan calculator, a loan qualification calculator, a compound interest calculator, and a date calculator. Reg Fee $9

MATHWZ25

MathWiz 2.50 is an easy-to-use financial calculator for Windows. Functions include PV, FV, PMT, IRR, periods, payback, and more. Other features include spreadsheet-style entry of irregular cash flow, printing options, date calculations, multi-term amortization tables, and more. Reg Fee $20

MMG*

Mattie's Math Games 3.0 is a collection of games designed to teach younger children number recognition, counting, number order, addition, subtraction, multiplication and division. Problem solving and analytical thinking skills are developed as the child finds his or her way through these very hands-on games. The colourful graphics, voices, sound effects and background music all add to the highly interactive, very intuitive play. Requires Win95. Reg Fee $15

NLREG040*

NLReg 4.0 is a powerful regression analysis program for Win95/NT. It can perform multivariate, linear, polynomial, exponential, logistic, and general nonlinear regression. It can also plot data and equations. Reg Fee $65

MISCELLANEOUS

32PSSW20

PrimaSoft Software Organizer 2.00 is a powerful and flexible program that will help you organise your software in Windows. Features include support for an unlimited number of records, a graphical data field for scanned-in images, flexible sorting, a variety of printed reports, custom fields, and much more. Reg Fee $30

BKEEPER

Brother's Keeper for Windows 5.2F is a powerful genealogy package with support for English, French, Danish, Norwegian, Dutch and German languages. Features include the ability to convert files from the DOS version, support for 256-colour scanned images, a variety of printing options, and much more. Reg Fee $49

DEBTW30C (Win31)
DBT9530C (Win95)*

Debt Analyzer 97 3.0c helps to reduce debts through timed elimination or consolidation schedules. It can handle up to 50 debts at once. Reg Fee $25

FASTYP

FasType for Windows 5.10 is a full-featured Windows typing tutorial. It shows a 3-D keyboard image and uses animation plus TrueType fonts to prompt the typist to type correct keys. Features include multiple skill levels, timed exercises, the ability to view your statistics, and much more. Reg Fee $29

SCRIPT11

ESF's Script Fonts 1.10 is a collection of kerned TrueType script-style scalable fonts for Windows. This includes Aristocrat, Brush, ESF Elite, Grandam, Hotpress, Jessica, Old English, Saffron, Tech Bold, and Zap Chance. Reg Fee $25

REMINDERS

ALARM410

Alarm (ST) 4.10 is an advanced desktop reminder system. Alarms can be set for a specific date, for specific days of the week, and for certain repetition intervals. An adjustable snooze bar is provided for each message. Messages can have up to six lines of free-form text. Reg Fee $10
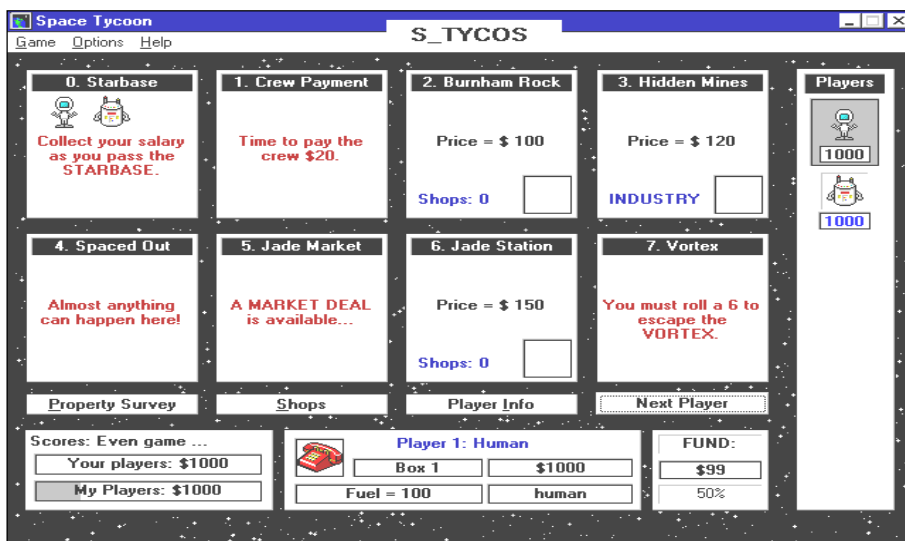
ALARMCAL

Alarm Calendar 2.0 has 10 daily repeating alarms, 10 appointment alarms, and a countdown timer. It also prints calendars in 4 sizes with and without borders. It optionally shows holidays; saves and prints daily memos; and more. Reg Fee $26

REMINDR*

Reminder (MS) 2.1 is a powerful event reminder for Windows that support both one-time and recurring events. Features include an easy-to-use toolbar interface, the ability to run automatically when Windows starts up, Win95 support, and more. Reg Fee UCALCW

WDATE210*

WinDates 2.10 allows you to keep track of important dates to remember during the year. It automatically calculates and reminds you of many important holidays such as Mother's Day and Father's Day which can be hard to remember since they may fall on a different date each year. Requires Win95/NT. Reg Fee $10

SCREENSAVERS

3ALINE10*

3aline Screensaver 1.00 displays beautiful floating 3D shapes on your Win95 desktop. Reg Fee $20

3DSAVER

3Draw! Screen Saver displays a variety of 3-D objects floating around your Windows desktop. Reg Fee $?

95LGD10S*

95 Lights Go Down 1.02 is a collection of 16 screen saver modules for Win95/NT. Other features include a randomiser that can call other screen savers, a bitmap slideshow option, and more. Reg Fee $25

AISS150*

Amazing Images Screen Saver 1.50 displays floating JPEG, GIF, PNG, and BMP images. Requires Win95/NT. Reg Fee $17

BALLSAVE*

BalloonSaver 1.2 is a WIN31/Win95 screen saver with animated hot-air balloons that float across the screen, blown by the clouds and wind. A password protection option is available. Reg Fee $19-$29

BIRDSAVE*

BirdSaver 1.2 is a WIN31/Win95 screen saver with animated swans, parrots, pelicans, cardinals, pheasants and more. A password protection option is available. Reg Fee $19-$29) CA100W95

D_BABY

Dancing Baby is a hilarious screen saver for Windows that displays a diaper-clad baby dancing with wild abandon to rock and roll music. Reg Fee $?

FRONTLET

Frontlets for Windows 3.01 is a Windows screen saver that displays a random Bible verse at a user-specified interval in large high-resolution graphics. Screen colours and fonts can be customised to your tastes, and password protection is available. Reg Fee $13-$17

FISHSAVE*

FishSaver is a WIN31/Win95 screen saver that features animated swimming tropical fish. Reg Fee $29-$39

JURASSIC*

JurassicSaver 1.2 is a WIN31/Win95 screen saver that displays animated dinosaurs on your desktop. A password protection option is available. Reg Fee $29-$39

LIGHTOUT

The Lights Go Down 2.31 is a collection of 20+ screen saver modules for WIN31. Features include password support, a randomiser, a variety of special effects, and much more. Reg Fee $15-$25

MYSCREEN

My Screen Saver 1.01 display a sequence of your own favorite graphic bitmap images with transition effects. Features include the ability to scroll custom messages from right to left across your screen, display left or center justified messages on your screen every 5-30 seconds, and password protection. Reg Fee $15

PCTRSHOW (Win31)
PICSHO32 (Win95)*

MyPictureShow is a Windows screen saver in which the visual content is supplied by your own collection of computer images. There is no limit to the number of pictures you can use, and nine different display modes are available. The slideshow mode allows a choice of 17 transition styles. Other features include support for BMP/JPG/GIF graphic files, password protection, automatic scaling of large images to available screen size, and more. This demo version will run 20 times, then disables itself. Reg Fee $12-$16

PHOTOOP

PhotoOp is a screen saver that scrolls overlapping images (JPEG/GIF/BMP) across the screen in various directions, at varying speeds. Many optional features may be specified, either in advance through user dialogs, or in real time, in response to keyboard or mouse commands. Reg Fee $30

SPACESAV*

SpaceSaver 1.2 is a WIN31/Win95 screen saver with photo-realistic astronauts, a space shuttle, galaxies, the moon, and more. A password protection option is available. Reg Fee $29-$39

WTRFAL13*

Waterfall Saver 1.3 is a screen saver for WIN31/Win95 that displays an animated waterfall. Reg Fee $19-$29

Business Card Designer Plus - [F:\BCD376\SAMPLE.BCD]

File Edit Mode Text Colors Alignment Options Window Help
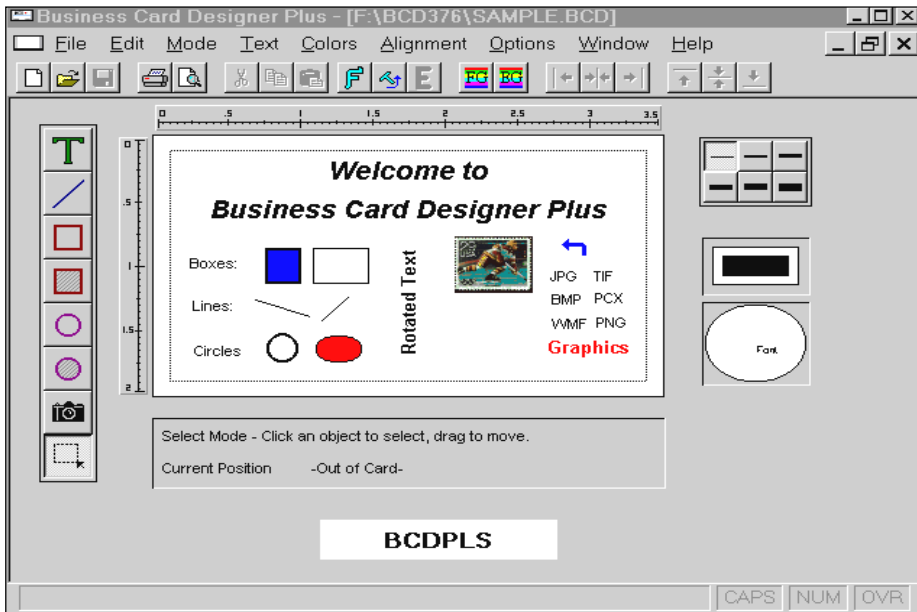
UTILITIES

CLEANU

CleanUp for Windows 95 1.1 helps remove those pesky TMP, BAK, and zero byte files from your hard drive. Features include the ability to remove files to the Recycle Bin or completely delete them, removal of broken shortcut links, the ability to confirm deletions, and more. Reg Fee $15

EFCW*

Commander 1.05 is a Norton Commander clone for Win95/NT. Reg Fee $39

NK13

NoiseKiller 1.3 reduces noise and saves power by spinning IDE drives down after an inactivity timer. Drives will start spinning again at the first request. It also includes an information file in Write format that details more ways to help silence your computer system. Reg Fee $20

RESCUES4

Rescue 95 4.0 helps backup and restore you Windows 95 configuration. If Win95 should fail to load correctly, it can fix most problems automatically. A DOS version is included that can do all the repairing from outside Windows. Reg Fee $24

TRANSX95*

Transfer 95 Personal Edition 02.05.1 allows you to export an entire operating system to another physical hard drive, including all pre-installed applications and their associated settings. Requires Win95. Reg Fee $40

ALRM_CRA*

Alarm Clock for Win95 2.0 is a 32-bit application that provides 10 daily repeating alarms, 10 appointment alarms, and a countdown timer. You can easily set the dates, times, and messages for all alarms. Reg Fee $23

CALLCHEK

CallCheck for Windows 3.15 is an easy-to-use program for finding dialing codes for countries and cities worldwide. It contains a comprehensive database of over 5,000 US and international place names and their area codes. You can find an area code by entering the city, state or country name, or find the location of any US or international telephone (or fax) number simply by typing in the number. Reg Fee $25

HIDEIT11*

HIDE-IT! 1.1 allows you to hide windows, taking them off the screen, off the taskbar and off the ALT-TAB chain. This way you can hide those windows that you want to keep open, but you don't need to monitor very often. Requires Win95. Reg Fee $0

MLIT95NT*

Mouse Launch-IT! 1.0 allows you to easily launch programs with certain movements of the mouse. Mouse movements such as 'Left-Right-Left' will trigger the launching of a particular program while 'Right-Left-Right' will launch a different program. There are eight different mouse movements that can trigger programs. Requires Win95/NT. Reg Fee $15

PB136*

PowerBar 1.36 allows fast and easy one click access to your applications and programs groups. Other features include instant drive access, support for virtual desktops, shut-down/reboot options, drag and drop support, an analog clock, a free disk space display, and much more. Requires Win95/NT. Reg Fee $15-$25

SCLIP342*

SuperClip 3.42 is a Win95/NT Clipboard viewer that can save all or part of the image on the clipboard to a graphics file in BMP, GIF, or PCX format. Reg Fee $39

WLCHK95*

Link Check 5.3 verifies links between executable files and modules/DLLs in Win95. It allows you to view version information, check modules loaded in RAM, analyze function calls inside DLLs, and more. This is extremely useful for analyzing those 'Cannot find (filename) or one of its components' and 'Call to Undefined Dynalink' system error messages. Reg Fee $39

WE31_202 (Win31)
WE95_202 (Win95)*

WordExpress 2.02 is a full-featured word processing package. It contains a multitude of professional features including WYSIWYG editing, scalable fonts, multiple column support, a user-customizable tool bar, powerful page layout features, headers/footers, mail merge options, built-in spelling checker/thesaurus, and much more. Reg Fee $50

NEW AND UPDATED DOS PROGRAMS

ANTIVIRUS

AVSCAN

AVScan 3.52 scans for more than 7500 virus signatures, not including the other special identification methods it uses. These methods are used to detect polymorphic viruses, such as MtE, TpE, NED, Tremor, Girafe, Uruguay to name but a few. Reg Fee $0

FPROT227

F-Prot 2.27 scans disks, hard drives, and all network drives for viruses using one of 3 methods: a secure scan which is slow, but makes an accurate identification; full scan which is a little faster, or a quick scan that only searches for known variants. It detects 250 families of viruses. It scans diskettes or

your entire system, and allows the addition of a user-defined hexadecimal search pattern with wildcards. It performs an analysis of the memory allocation, programs, and boot sectors. It reports a list of infected files, disinfects files, and renames the infected files so they may not be executed. Optionally scans DOC and DOT files for Microsoft Word Macro-based viruses. Reg Fee $0-$20+

PM_302E

ScanPM 3.0.2 ScanPM Protected Mode VirusScan by McAfee, Inc. Scans and cleans PC's/LAN's for known and unknown viruses. Reg Fee $65

SCNI302E

VirusScan 3.0.2 scans diskettes or entire systems and identifies any pre-existing PC virus infection Reg Fee $65
Games

1EVEREST

Everest: Iceman's Apprentice 1.0 is a mountain climbing game. Scan the glossary to pick up some of the terminology, then join a team of climbers to lead your first expedition on Mount Rainier in Washington state. There is no animation, only a few photographs of mountain ranges. You play the game by setting criteria and making decisions to reach the goal. Reg Fee $24

CHARLY

Charly the Clown 1.30 is a comical arcade-adventure game. Help Charly the Clown find his way to each level and avoid a host of enemies and pitfalls. Charly's armed with a bag of water balloons and he is not afraid to use them. Reg Fee $20

ESFTTI23

ESF's European LaserJet Fonts 2.3 contains 12 soft fonts that will print almost any European language. These fonts support any HPLJ or compatible printer. Fonts include Garamond, Helv and Roman 12 point medium/bold/italic, plus 18 point bold versions. Utility programs are provided for downloading and printing sample sheets of fonts. Printer drivers are included for WordPerfect 5.0 and 5.1, MS Word 5.x, MS Works, Ventura, PageMaker, and Windows. The fonts come with the PC-850 symbol set and directly support German, Spanish, French, and many other languages. Reg Fee $25-$50

JOCCAL11

JOC-CALC 1.1 is an easy-to-use spreadsheet package for DOS. Features include a pull down menu system with mouse support, a hypertext help system, support for block operations, built-in math/trig functions, and more. Reg Fee $20

MPLUS262

M-Plus 2.62 is a complete mailing list system with support for international dates, phones and postal codes. It features plenty of lines for complex addresses, automatic duplicate checking, search by spelling, sound of words, or field, merge options, importing from other applications, label and report printing, phone dialing, password protection, and more. Reg Fee $39

MDRAFT

Easy Draft 5.1 is a drafting program. Features include zooming, panning, parallel lines, circles, painting, object/symbol libraries and adding text to your drawing. Objects can be created, moved, copied, rotated and hidden without any effect on the main drawing. Reg Fee $0

PEOPLE21

People Clip Art 2.1 contains 30 colour PCX images of people at work and play. This includes artist, babies, bank, business, construction, cleaning, florist, dancing, chef, groom, hippie, landscape, doctor, nurse, musician, police, sports, romance, student, teacher, and more. The included installer shows you samples before the clip art is unpacked. Reg Fee $25

NOTYET

Notyet is a unique and challenging arcade game where you must try to match up coloured trigrams to clear a level before advancing to more complex levels. Your 'blaster' resides in the center of several spinning circles, and you shoot the trigrams so they will line up. Special effects such as warps, black holes, yin/yangs, and more will impede your progress. Requires a 486+, 8 MB RAM, and VGA. A soundcard is recommended. Reg Fee $20

PCCLK430

PCClock 4.30 is a digital alarm clock that displays the date and time in big characters and will optionally set your system's time and date automatically by calling (through your modem) the National Institute of Standards and Technology's atomic clock in Boulder, Colorado. There are 12- and 24-hour modes, and an optional Big Ben hourly chime. Reg Fee $20

VDE

Video Display Editor 1.83 is a fast, powerful text editor. Commands can be entered from a menu bar or with control keys. Features include a proportional spacing mode, keyboard macro recording, MenuBar mode; the ability to edit eight files at once; a command for proportional print; Autosave to automatically save your work at specified intervals; simultaneous windows scrolling; the ability to align the platen for printing on various kinds of forms; support for the file format of MS Word; an envelope printer; a wide range of screen sizes (from 17 to 57 lines); an integrated spell checker; and much more. Support is also provided for UltraVision, the HP95LX palmtop, and the Tandy keyboard. Reg Fee $35
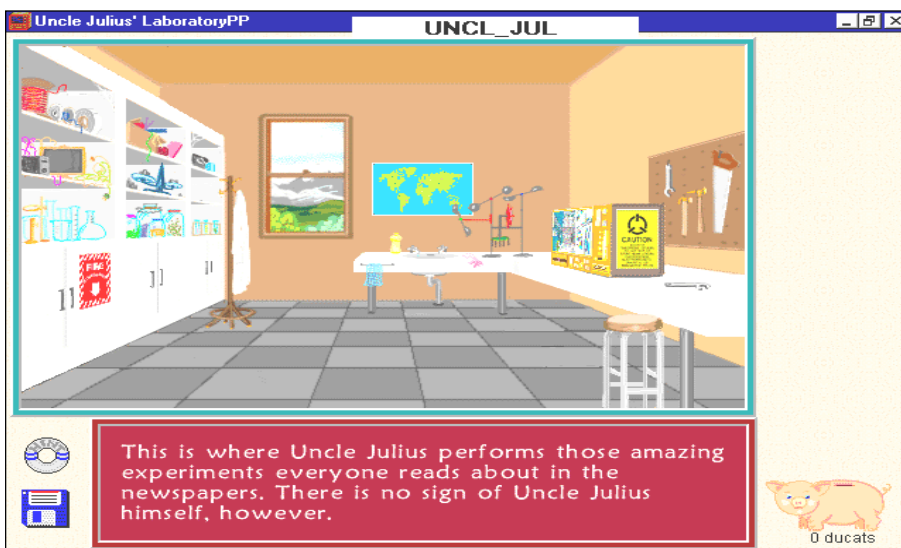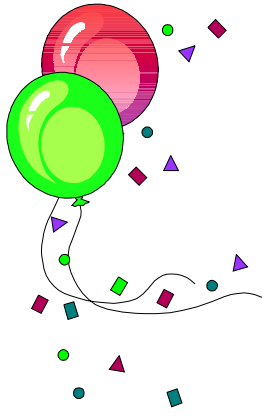
Volunteers'

Or what your volunteers really get up to on the weekends

Photos by Don Darling

Rod Farr and Anne Greiner

Hugh Bambrick tries to set a PCUG dress standard ...
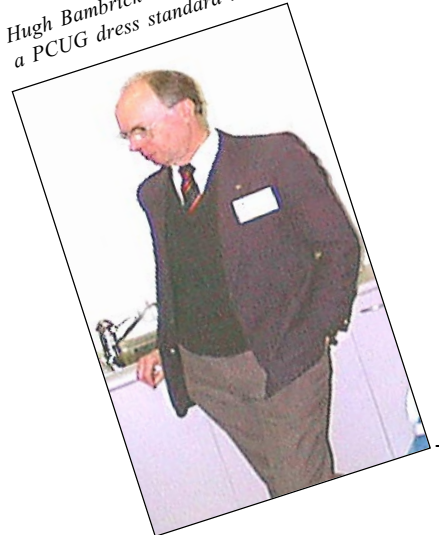
How to Edit a Magazine. First, take your mouse ... Tamsin Sowden gives the low-down to Ian Johnston and Marian Van Wely

Incoming President Ken Livingston shows a laid-back style ...

One drunken afternoon at the PCUG Centre, David Schwabe and Petra Dwyer decide to hang the Intergalactic Newsletter awards. Proceedings were directed by Anne Greiner, Tamsin Sowden and Minka Schwabe (Alignment Consultants and Pendent Specialists – enquire now about our special Sunday rates)

First one's all right ...

Jacket off, down to work ... and about to drop the third nail ...

Day

... but doesn't succeed.

Michael Lightfoot

Anne Greiner finds it's all too much

... while outgoing President Ann Byrne learns the value of hard yakka.

Andrew Clayton and Chris Collins amuse themselves playing some obscure shoot-'em-up type game: Quiver ... or Shake ... or something ...

Having trouble finding that pesky, tiny little hook thing ...

Job done, all nice and straight. Well, nearly straight. WELL THEY LOOKED STRAIGHT ON THE DAY, ALL RIGHT?!

QOOL QURLS

Compiled by Anne Greiner

THE BAYEUX TAPESTRY

The Bayeux tapestry was commissioned to celebrate the victory of William the Conqueror at the Battle of Hastings in 1066, and so is more than a thousand years old, and it's amazing that it has survived at all, let alone in the condition that it's in. Just looking at it evokes a feeling of awe, and the next best thing to actually standing in front of the tapestry in person is this site. The graphics are a tad slow to load, but worth it, and the colours glow from the screen. The story is told in the main, centre part of the work, but the top and bottom borders add a lovely little commentary of day-to-day living (check out the expressions on some of the faces). Worth bookmarking and going back to.

http://blah.bsuvc.bsu.edu/bt

THE BAGPIPES GO TO THE MOVIES

You have to have Scottish blood to appreciate this site, lots of it, both of which I do. Alistair B Fraser and Scott Williams have put together literally hundreds of films and television clips with a brief gobbet of information about each one. For instance did you know that the bagpipes played in some of the Braveheart battle scenes were too

modern by 400 odd years, that the pipes were played in a scene of the Simpsons (heresy!), and that someone in E.R. had sung with group of Australian pipers in one episode. In many cases the band or even the individual piper is named. There is a link to Fraser's home page that is a reference document on Celtic music and the instruments that make it. Stirs the blood, and that's why bagpipes were declared illegal after the Battle of Culloden as a weapon of war. Ceòl Binn.

http://ems.psu.edu/~fraser/PipesMovies.html
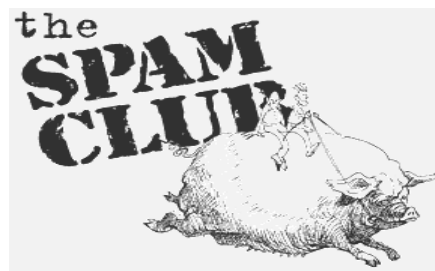
PYTHONLINE

And now for something completely different… This is almost as good as the original radio, and the puns, my dear, the puns! The obvious ones like the title are great, but the best ones are those that creep up on you unawares and ambush you into guffawing out loud. The graphics in the colouring contest are a delight (one of which is the graphic for this column), and I for one have printed off my fan picture of *'the nice one'*, suitably inscribed from a list of possible greetings (delicate sentiments, all of them). I thought I may have gone to the wrong address though, when I first accessed the page, because there was a black screen with a fuzzy white blur which evolved into 'Diana', and was followed by a short editorial about the press and privacy issues, and presenting us with a petition to sign. There were signatures from all over the world – amazing how many people in Brazil visit the site.

http://www.pythonline.com

TAKEDOWN

Takedown is the true story of the capture of the hacker Kevin Mitnick, who eluded Police and FBI for more than two years, until he was improvident enough to break into the computers of Tsutomu Shimomura and annoy him. The story is spellbinding, even for someone as technically ignorant as me. I went out and bought the book on the strength of this site, and found it as engrossing as Clifford Stoll's *The Cuckoo's Egg*, which has a somewhat similar story. The site gives all the gory technical details, live transcripts of sessions, clips of voice mail, media coverage, etc, plus the most awe-inspiring personal and professional biography of Tsutoma Shimomura, who looks as though he shouldn't be out of high school, let alone where he is. Great site, although a little difficult to navigate in patches.

http://www.takedown.com

TRAINLINK

Trainlink describe themselves as being a major repository for any and all things to do with Railways, Tramways, and Model Railways in Australia and New Zealand, and despite the fact that they haven't updated their page since October last year, there's still some good stuff on it. For instance I found out what a DCC is (Digital Command Control), and, most interestingly, what an

MMR is. An MMR is a Master Model Railroader, and we have half a dozen or so of them in Australia, and one Grand Master Model Railroader, and there's a lovely picture of these burly gentlemen, all in their overalls, without a smile between them (serious business, railroads). The picture gallery is really interesting, particularly when you consider that these are models, not the real thing, and that all the scenery as well is hand-made. I suspect that there are a lot of model railway widows out there – I can barely imagine the amount of time a hobby like this must take.

http://www.formlink.com.au/trains.html

WATERWATCH

Waterwatch is a national volunteer water quality monitoring program. Individuals, Landcare groups, schools and other community groups thoughout Australia are involved in numerous small and large research projects, such as the students in Queensland who breed the tadpoles of endangered frogs and release the frogs into their natural habitat. This is a gorgeous site, with lovely graphics, and does what so many other groups do not – it tells us how to make a positive and practical contribution to our environment, and it encourages us to start at an early age through one of the school projects. Always have loved frogs —

http://www.waterwatch.org.au
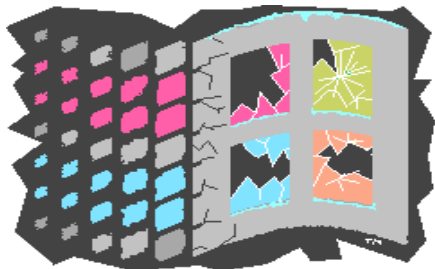
GREG'S MICRO$OFT HUMOUR PAGE

This man just hates Microsoft. In the opening paragraph he promises to tell us more about the 'evil nature of Micro$oft',

and gives us a link to the 'Why I hate Bill Gates' page. The jokes are arranged by category, eg Bill Gates jokes, Microsoft jokes, MS-DOS, Win 3.1 (Windows for Warehouses), and so on. The jokes seem to be a compilation, and the standard (and the taste) varies considerably from one to another. Reminds me rather of the vitriolic and often not very well informed debate about the relative merits of PCs and Macs, except that these have the saving grace of being funny (mostly). There is an email address to send in our contributions for the delight and delectation of the surfing community, that is, if you can ever get the URL entered correctly!

http://www.cs.bgu.ac.il/%7Epribushg/ jokes.html
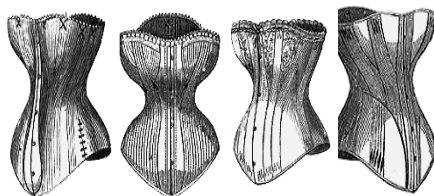
LUANA'S GUIDE TO FASHION AND SEWING RELATED SITES

This, as well as being a site in its own right, has the most amazing number and variety of links to any and all sites connected with sewing. There are commercial pattern companies such as Vogue and McCalls, pattern drafting instructions and software, Couture collections (see the Gianni Versace Fall Collection put up as a commemoration of his life). There are sewing machine sites such as Bernina and Singer, a whole range of fabric information and supply sites, craft ideas, clubs, and suppliers, haberdashery outlets, theatrical costumes and patterns, and many more. My absolute favourite, Historical Corset Sites, of which there are a surprising number, tells us 'How to make a Victorian Corset', and it's a bit like Mrs Beaton (first select your material) and then continues right through to instruction for wearing your corset. Just think, if I get out the sewing machine, I could completely change my outlook on life and my silhouette at the same time.

http://www.student.uwa.edu.au/student/luana/ sewing.html
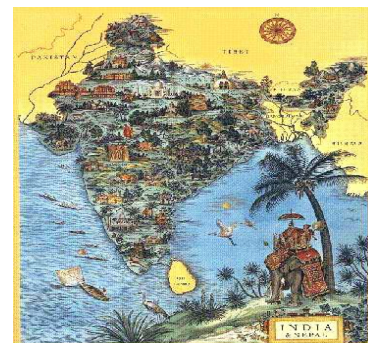
RAMBHOJA AND THE SEARCH FOR THE TREASURES OF INDIA

Rambhoja is a game, but one with the expressed purpose of teaching some history and geography of that vast country at the same time as playing a game (a bit similar to *Where in the World is Carmen Miranda*). The scenery (real) is great, and the cartoon depiction of Indian characters is hilarious. The player (Rambhoja) starts in a city, and is given a potted history of that place, then, by dint of astute questioning, proceeds around the country, hopefully not getting too lost, or taking too long. The whole thing is great fun, but it did take a lot of my precious online time, and also provided a rather depressing assessment of my knowledge of the subcontinent's geography.

http://www.vikora.com/Namaste/Rambho

DESTINATION JAGUAR

This is a commercial site as well as one for afficonardos of the wonderful beast. The new Jags are a truly beautiful luxury car, but the old ones are the ones that involve images of days gone by, and different lifestyles. Although much of the site is American, there are lists of Australian dealers, and Australian associations, which are then sources of hard-to-get parts for the more elderly of the genre, and the section on history has some good bits in it. The graphics are slick, and the site is easy to navigate, and it made me quite nostalgic for the old XK150 called Gloria that an ex-boyfriend of long ago used to drive (I can't remember *his* name).

wysiwyg://main.72/http:// www.jaguarvehicles.com/us/home2.html

Compiled by Malcolm Morrison

A Bite of the Apple

Microsoft is to invest US$150 million in Apple Computer. The new alliance between the two companies was announced at the Macworld Expo Trade Show in Boston. The announcement by Apple guru Steve Jobs was greeted with gasps of disbelief and boos. Later reports say that the US Justice Department is scrutinising the investment to determine the effect it may have on competition. Anti-trust investigators in the US are also reported to be investigating three recent deals between Microsoft and smaller companies that have developed technology to transmit video images over the Internet.

New Way to Zip

Software Suppliers has announced the release of ZipMagic 1.0, which it describes as a revolutionary new Windows utility that takes all the hassle out of dealing with the .ZIP archive format.

With ZipMagic installed on your PC you can access the contents of zip files without having to unzip files to a temporary location, or type in DOS commands. Zip files can act like normal Windows folders, without an effect on the operating system. ZipMagic, developed by US vendor Mijenix, also includes a fully featured archive manager (in Windows 95 only), allowing you to perform a wide range of archive functions. You can quickly and easily archive information, save hard disk space, transfer data via floppies, and upload and download large amounts of information without having to put up with the hassles normally associated with zipped files.

Zip files act and appear as normal Windows files. So the contents of a zip file can be used like any normal (uncompressed) file. You can perform virus checks, file searches, rename, modify or change the attributes of any file within a zip file without having to unzip them. Mijenix says you can squeeze gigabytes of information onto a 250Mb SyQuest drive or a Zipdrive. You can span a large zip file over multiple diskettes, create self extracting zips, and password protect zips for security. ZipMagic can check zip files for integrity, repair damaged zip files and convert other archive formats.

ZipMagic claims to be the first zip utility to incorporate free electronic updating via the Internet to the latest maintenance version. It will run under either Windows 3.1x or Windows 95 and requires 8Mb of RAM and 2.5Mb of hard disk space. ZipMagic costs $59.95. in Australia. More information at *www.softwaresuppliers.com.au*

Here Comes Internet Explorer 4.0

The official release date in Australia for Microsoft's Internet Explorer 4.0 is 1 October. IE 4.0 offers a new Web-based graphical user interface, providing one way of browsing your hard disk, computer network, Intranet and the Web.

Alternative to "Bloatware"

Claris International has released ClarisWorks Office 5.0, a complete cross-platform solution that delivers all the office user needs for small business, home or education. Priced at $174 and still about one third the size of other suites, ClarisWorks Office 5.0 provides a compact and economical alternative to high-end suite products.

ClarisWorks Office 5.0 features a customisable button bar; Internet enabling and linking; enhanced HTML translation for immediate productivity on the desktop or the World Wide Web; Netscape Navigator; Claris Home Page 2.0; and more than 230 ready-to-use documents including a set of small business solutions from the makers of the top selling business planning software, BizPlanBuilder.

Designed for users who need instant productivity and do not have dedicated support technicians to back them up, ClarisWorks has attracted more than 15 million users worldwide. One recent study rated it as more reliable, easier to learn and offering more value for money than Microsoft Office.

ClarisWorks continues to require modest computing power: 8Mb of RAM and 68Mb of disk space for a full install. ClarisWorks Office 5.0 is due for release in late September/early October on Windows 95, NT 4.0 and MacOS platforms. On all platforms ClarisWorks Office 5.0 requires a CD-ROM drive and 8Mb of RAM with 18Mb of disk space for a minimum install.

Ring 1800 028 316 for upgrades or contact your authorised Claris reseller. Claris is at *www.claris.com.au*

AUSTRALIAN COMPUTER SOCIETY (ACS) – CANBERRA BRANCH MONTHLY MEETINGS

The October 1997 meeting of the ACS Software Quality Association (SQA) will be held at 6 pm on Wednesday, 15 October 1997 (3rd Wednesday of the month) at Room N101, Computer Science and Information Technology Building (Building number 108), North Road, Australian National University. At 7 pm there will be free juice/nibbles/sandwiches. At 7.30 pm at the same venue a representative from Oracle will speak on 'Textual processing' at the ACS ACT monthly meeting. A nominal charge of $5 applies for non-ACS members, if they are not the guests of members.

Corel WordPerfect Suite 7 for Windows 3.1x

Corel Corporation has announced that it has begun shipping Corel Word-Perfect Suite 7 for the Windows 3.1x environment. With the feature-rich, productivity-enhancing tools today's users demand, Corel WordPerfect Suite 7 for Windows 3.1x offers powerful software, incredible ease of use, plus value-added desktop tools and Internet connectivity. Corel WordPerfect Suite 7 for Windows 3.1x is selling at an RRP of A$549 and an upgrade price of A$279. Prices are subject to change without notice.

Corel says it recognizes that there is a substantial user base working in the Windows 3.1x environment: 'We are pleased to offer a comprehensive solution to users of the 16-bit environment. The tight integration and ease-of-use of the suite makes it easy for users to upgrade to the 32-bit program at some stage in the future.'

Corel WordPerfect Suite 7 for Windows 3.1x integrates the Web as fully as it does word processing. Corel says it is the only Windows 3.1x-based suite to offer complete Internet connectivity and features. Some of the features include the Internet Publisher which easily converts documents to and from HTML format, a WYSIWYG document display, dynamic Web links and Web publishing to EnvoyTM 1.0a. Features and applications available in the suite include:

Corel WordPerfect 7 – Includes advanced automation tools for spell checking, grammar checking and effortless formatting.

Corel Quattro Pro 7 – Offers a new dimension in spreadsheet innovation. This award-winning spreadsheet contains new chart styles, a new mapping feature, Quick TemplateTM, Internet connectivity, and right mouse-button support for fast access to formatting options.

Corel PresentationsTM 7 – Presentation software that fits business communication needs. Includes a variety of transition effects, bitmap filters, 3D tools and clipart images to tailor presentations to fit specific data.

Corel Paradox 7 – A powerful database application that delivers a winning combination of ease of use, performance and dynamic application development. Offers smooth integration with Corel WordPerfect 7 and Corel Quattro Pro 7.

Corel Time Line – Compelling multi-project management tools specifically tailored to meet the needs of corporate managers. Plan projects around real-life situations and anticipate actual results by tracking required tasks, resources, dependencies and costs.

CorelFLOWTM 2 – Tool for creating flowcharts, diagrams, schematics, organizational charts, hierarchical diagrams and more.

EnvoyTM 1.0a – An electronic publishing tool that makes it easy to publish documents electronically with fonts, formatting and design intact.

Netscape NavigatorTM 2.02 - Netscape's popular Web browser integrated into Internet and Web features of the suite.

SidekickTM 2.0 – Starfish Software's personal organizer is one of the leading personal information managers. Recording information is as simple as using an index card or a paper-based organizer.

DashboardTM 3.0 – Starfish Software's award-winning Dashboard 3.0 is an easy-to-use control panel that makes Windows programs instantly accessible.

Free CD-ROM Bundle with Adobe Applications

To help new customers quickly become productive with the company's integrated graphics applications, Adobe Systems has launched the Adobe ActionPack, a three-CD set of software plug-ins, professional-quality content, interactive learning materials, and tips and tricks. The Adobe ActionPack is included at no charge with full retail copies of Adobe Photoshop, Adobe PageMaker and Adobe Illustrator purchased worldwide between 1 September and 31 December 1997.

Adobe FrameMaker 5.5 for Windows, Macintosh and UNIX

Adobe Systems has announced the latest version of the Adobe FrameMaker family of software products for Windows, Macintosh and UNIX platforms, including FrameMaker 5.5, FrameMaker+SGML 5.5, FrameViewer 5.5 and the Frame Developer's Kit, a complete authoring and publishing solution that helps businesses solve the problem of creating complex and longer documents for both print and the World Wide Web.

See *www.adobe.com* for more information.

The INTERNET Project

Applicant Details (mandatory)

First Name: _____

Last Name: _____

Principal Organisation

☐ AUUG   ☐ PCUG

Membership Number: _____

I, the applicant, declare that I have read the terms of this application, and affirm that the details I have provided are correct.

Signed: _____

Existing Accounts

☐ Change from LIMITED to FULL ACCESS

☐ Renewal for FULL ACCESS - 12 months

Current Login Name: _____

New Accounts

☐ NEW Application for FULL ACCESS

☐ NEW Application for LIMITED ACCESS

Login name request, in order of preference (optional)

1. _____

2. _____

3. _____

*Your login name must be 2 to 8 characters long. It may contain only letters and numbers, and **MUST be clearly based on your real name***

Payment (Full Access only)

Please make cheques payable to:

PC Users Group (ACT) Inc

Payment: **$120**

Method of payment: ☐ Cash   ☐ Cheque

☐ Visa   ☐ Bankcard   ☐ Mastercard

Card number: _____

Expiry date: _____/_____

Name on card: _____

Signature: _____

PCUG Office Use Only

Processed by Accounts: _____/_____/_____

Signature: _____

IMPORTANT NOTES – please read

1. Access the The Internet Project is available only to members of PCUG or AUUG and is governed by The Internet Project Acceptable Use Policy, copies of which can be obtained at the PCUG Centre, or downloaded from the PCUG BBS or from The Internet Project.
2. The Internet Project is managed and administered by volunteers. The Internet Project aims to offer affordable access to as many members as possible, allowing members to experience all the resources of the Internet. *No minimum level of access or service is offered or guaranteed.*
3. There is a limit of one Internet account per non-corporate membership. Corporate members may sponsor up to three individuals, who are then *personally* responsible for the operation of their accounts. Please complete one application for each person.
4. Part of your email address will be determined by the principal organisation. If your membership of the organisation expires, so too does your membership of the The Internet Project. In this event, no refunds for unused allocation will be made.
5. The Internet project reserves the right to alter prices and services offered at any time. Fees paid for Internet access are non-refundable and non-transferable.

Access Categories

6. Note: Hours debited do not necessarily equate to real hours on-line; time allocation will be debited in a *non-linear* fashion depending on the amount of time spent on-line in any given day. The debit rate is set from time to time by the Internet Project Management Committee.
7. Limited Access
   a) Limited Access provides terminal-based email and news only.
   b) Limited Access is free on application.
   c) In any calendar year, calculated from the date of application, Limited Access provides up to 100 'hours' usage.
8. Full Access
   a) Full Access includes email, news, and SLIP/PPP.
   b) Full Access is not free. Current rates are $120 for one calendar year of access with up to 300 'hours' usage.
   c) When your Full Access subscription expires OR you use 300 hours of access (whichever is earlier), you will be required to purchase another subscription for one calendar year from that date.
   c) Full Access users also receive a Limited Access allocation – see above.
9. All users joining The Internet Project receive a one-off, free five hour allocation of Full Access.

Collecting your login details

10. A waiting period of two months applies to new members of the PC Users Group (ACT) Inc.
11. For existing members, please allow up to two weeks for your application to be processed.
12. Login details can be collected – *in person by the applicant* – from the PC Users Group Centre. We recommend that you phone the Centre first to check that the details are waiting for you.
13. You (and your parent/guardian if you are under 18 years of age) will be required to sign an Acceptable Use Policy Declaration when you pick up your login details. Photographic proof of identification will be required at that time.

Member Services

These special offers and services are only available to PCUG members. Please bring your membership card with you when collecting orders.

Disks & Tapes

We offer high quality disks and tape cartridges in various formats at very reasonable prices. **Disks & tapes** are available from the PCUG Centre Monday, Wednesday & Friday 10am to 2pm or between 9am and 5pm on weekends.

BBS Access

New members wishing to access the PC Users Group (ACT) InterActive Bulletin Board Service (BBS) should dial (02) 6253 4933 and create an account on the system. Once the main menu is presented, select the 'Goodbye' option followed by the 'Yes' option to leave a message to the Sysop.

In this message state your membership number (from your card or magazine address label) and request an access upgrade. This will usually occur within a few days.

Shareware

Members have access to a huge selection of 'shareware' software. The PCUG subscribes to a CD-ROM which provides over 250 Mb of new and updated software titles on each monthly CD.

One complete section of the permanent library is also contained on each CD-ROM. In addition, there are many programs on the PCUG BBS which members have uploaded or which come from other sources.

This software is provided as "shareware". If you continue to use it, you must register the software with the author. The Group does not 'sell' the software - it charges a fee to cover the cost of obtaining the software, maintaining the library and copying the software to the member.

Computers are available at the Centre which are connected to the BBS enabling members to download software.

Hardware & Video Library

The hardware and video library is located at the PC Users Group Centre. Items may be collected and returned on Saturdays and Sundays between 9am and 5pm (loans are for one week). Please bring your membership card with you.

The library provides access to equipment which members would not normally have readily available. Most items have instructions manuals and software where appropriate. Modems do not include software; check the Shareware Library for suitable packages. Items may be borrowed for one week. There is no charge, but you must collect and return the items yourself.

Equipment available includes:

- modems (33.6k and 14.4k)
- soundblaster card
- zip drives.

Videos include:
- Developing Applications with Microsoft Office
- Using Windows 95

Stuffed Again

The following members and friends are thanked for assisting with stuffing our Journal for mailing.

Bruce Black
Guy Clarke
Owen Cook
Eddie & Raymond de Bear
Graham Dietrich
Tony Fitzpatrick
Vernon Kronenberg
Jenny Laraman
Wolf Lieske
Peter Marcusson
Allan Mikkelsen
Don Nicol
Gayle Pershouse
Keith Sayers
John Starr
Graeme Taylor
Marion Van Wely
Peter Watney

We are *always* looking for volunteers to assist us with the 'stuffing' of our journal. We start around 5.00pm (latecomers are welcome) *usually* on the 2nd last Monday of every month and are generally finished by 8.00pm. Refreshments are provided and any of your knotty computer problems can be debated 'at the round table' in congenial company. If you would like to help, please ring Petra Dwyer at the PCUG Centre on 6253 4911 and she will fill you in on all the details.

The following members and friends are thanked for assisting with stuffing our journal for mailing.

Next Stuffing

5.00pm **Monday 20 October 1997**
at Northpoint Plaza, Belconnen.
(see map page 3)

We now have a Giveaway Table at the PCUG Centre.

If you have any SMALL items of computer related equipment (software or hardware) that you no longer need or use and don't want to throw away, put them on the table and someone else may find a use for them.

Just bring them to the Centre when it's open and we'll pass them on for you.

Special Interest Groups

The Internet SIG

This a get together of those members of the PCUG who love to explore the Internet for interesting sites, new Internet tools and novel applications. It holds an informal meeting once a month on the first Thursday (January excepted), at 7.30pm. The meeting has no set agenda but free flowing chat on various Internet related topics and events. On occasion, we had presentations of interesting software. Among topics that are discussed from time to time are the upgrade of TIP, cable and wireless access to the Internet and the regulation of the Internet. The web page for the SIG is at: *http://www.pcug.org.au/~amikkels/intsig.html*
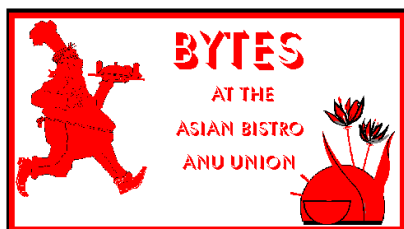
Bytes

The Bytes SIG is designed for those who like to talk about computing over a meal. It meets from 6 pm at the Asian Bistro, Australian National University Union, on the PCUG meeting nights. There are no Bytes SIG meetings in November, December, or January. Contact person: Andrew Freeman Phone: 6258 7411 Email: *afreeman@pcug.org.au* or WWW at *http://www.pcug.org.au/~afreeman/cvsig.html*

AutoCAD

Geoffrey May 6295 5942 Monday-Fri 4-5pm. Please call for details.

C/C++

Peter Corcoran . *peterc@pcug.org.au* 2nd Tuesday 7.30pm PCUG Centre

GUI Developers

Peter Harris 6287 1484 *pharris@pcug.org.au* Please call for details

The Investment SIG

The group meets at the PCUG Centre at 7.30pm on the fourth Thursday of every month except for December to discuss investment affairs, especially the stock market and share ideas and information. Matters covered may be someone's hot stock, or a tax problem or an interesting Web site, and sometimes a software demo. We are looking for volunteers to present brief reviews of a favourite stock. Contact Mick Preskett ph 6252 5036.

The OS/2 SIG

An enthusiastic forum for those operating or interested in OS/2 Warp. Meetings include wide ranging discussion and interesting hands on demonstrations. Meetings are held on the third Thursday at 7.00pm for 7.30pm at the IBM Building 8 Brisbane Ave, Barton. Contact David Thrum Phone 6201 8806 (bh). Full details about the OS/2 SIG can be obtained from *http://www.pcug.org.au/~aacton/os2/welcome.htm.*
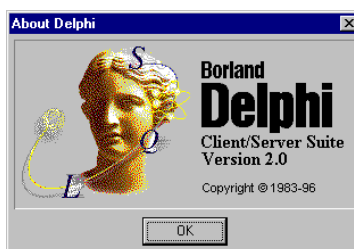
The Delphi SIG

A lively forum for software developers who are working with or interested in Delphi. Our meetings include wide ranging discussion and interesting hands-on demonstrations. Come and see why Delphi is RAD! Some of our recent meetings have discussed Delphi components, best shareware tools, database applications, and HTML tools. Meeting 3rd Tuesday of each month 7.30pm at PCUG Centre. Convenor Al Kabaila email *akabaila@pcug.org.au.* You are welcome to also subscribe to the PCUG Delphi mailing list by sending message 'subscribe act-delphi-l@pcug.org.au [your email address]' to Majordomo@auug.org.au

Linux User Group

Stephen Rothwell 6291 6550 (ah) Stephen Rothwell@canb.auug.org.au 4th Thursday 7.30pm Room N101 Computer Science Dept ANU.

Networks

Garry Thomson 6241 2399 *gthomson@pcug.org.au* Thursday after main meeting Please call for venue.

Computers and Vegetarianism

This SIG is designed for those who have an interest in both computers and vegetarianism. It generally meets with the Bytes SIG. No meetings are held in November, December, or January. Contact person: Andrew Freeman Phone: 6258 7411 Email *freeman@pcug.org.au* or WWW at *http://www.pcug.org.au/~afreeman/cvsig.html*

The Coffee and Chat Group meet at the PCUG Centre in Belconnen on alternate Tuesdays from 10.30am to 11.30am with another 30 minutes to 12.00 for those who want to stay. The dates of these meetings are shown in the Calendar of Events.

Internet Daytime Demo and Discussion SIG

Meets every second Monday at the PCUG Centre from 10.00am to noon. We meet to discuss internet issues, software, sites (and anything else of relevance), and demonstrate, on Centre equipment, selected software and techniques. The meeting starts with informal discussion and coffee, followed by a more in-depth look at a particular topic of interest. There is also time for discussion (and hopefully solving) of members problems with the internet. A home page for the SIG is at *http://www.pcug.org.au/~amikkels/intddd.html* Enquiries or suggestions for topics are welcome at *amikkels@pcug.org.au.*

Please email any changes in contacts, venue or information about SIG activities by the first Friday in the month of publication to *pcug.editor@pcug.org.au.*

Training News

by Peter Elliott

The program for 1997 has been adjusted to meet the demand for particular courses, particularly Internet courses. PCUG Training is able to, and willing to, conduct a variety of courses in other areas of computing. If you have an interest in a particular computer course and it is not currently scheduled, contact Petra and let us know.

Our training courses are very popular. Unfortunately, some people book and then do not turn up for their course. Someone on the waiting list for the course could have filled the spot left vacant. If you have booked for a course and are unable to attend, please let Petra know as early as possible so that another member can attend.

Please note: there will be no Internet Clinic on Saturday 4 October due to the October long weekend.
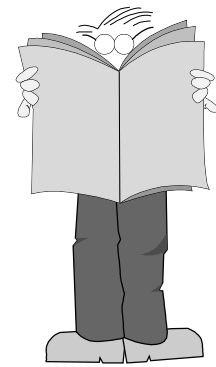
Courses

Microsoft Excel 5: In November, an introductory course on Microsoft Excel 5 will begin. This powerful spreadsheet program is ideal for those members who would like to learn about spreadsheets or would like a refresher on the subject. Excel 5 forms part of the Microsoft Office suite and offers the ability to create charts, databases, macros and linking or embedding (OLE) Excel to other Window's applications.

The **Full Access Internet** course is an introduction to the programs used to access the World Wide Web, send and receive email, participate in news groups, and transfer files. If you would like to attend the course, you will need Full Access (Advanced Access) to the Internet.

MYOB: In October an introductory course on Mind Your Own Business (MYOB) will begin. MYOB is a world-renowned business software package. The course is designed for members who have an interest in running their business by an accounting software package. Please note that this course **will** be conducted on the Sunday of the October long weekend.

The **Microsoft Internet Explorer** course had been designed to complement the updated TIP kit. The new TIP kit is now available for purchase from the Centre. The kit contains an easy method for setting up new members' computers to connect to the Internet.

Contacts

COURSE BOOKINGS: Petra Dwyer, at the PCUG Centre on 6253 4911

Training coordinator and course information (**not** bookings): David Schwabe, 6254 9086 (h) 7.00pm to 9.00pm, 6265 0471 (w)

Microsoft Product courses (**not** bookings): Michael Lane 6242 9278 (h) 7.00pm to 9.00pm

All courses are held at the PCUG Centre, Northpoint Plaza, Belconnen - maximum 8 people.

Courses cost $35 unless otherwise indicated. Full day courses run from 9.30am to approximately 3.00pm. AM Courses commence at 9.30am. PM courses commence at 1.30pm.

Month	Date	Day	Course	Length
October	4	Sat	*Sixteen Bits* Layout Day	Full Day
	5	Sun	MYOB	Full Day
	11	Sat	Introduction To Win95	Full Day
	12	Sun	Internet - Full Access Intro	Full Day
	18	Sat	Internet - Microsoft Internet Explorer / Internet Clinic	Morning
	18	Sat	Introduction To The Internet	Afternoon
	19	Sun	HTML Introduction	Full Day
	25	Sat	Internet - Full Access Intro	Full Day
	26	Sun	Introduction To Win95	Full Day
November	1	Sat	*Sixteen Bits* Layout Day / Internet Clinic	Clinic: Morning
	2	Sun	Win95 - Advanced	Full Day
	8	Sat	Microsoft – Intro Excel 5	Full Day
	9	Sun	Internet - Full Access Intro	Full Day
	15	Sat	Introduction To Win95	Full Day
	16	Sun	HTML Advanced	Full Day
	22	Sat	Internet - Full Access Intro	Full Day
	23	Sun	PC Maintenance	Full Day
	29	Sat	Introduction To Win95	Full Day
	30	Sun	MYOB	Full Day

Vendor Discount Scheme

The following local vendors offer discounts to PCUG members

- Present your PCUG membership card when making a purchase
- Benefits may not apply to some sale items
- The PCUG does not necessarily recommend or endorse the products being offered

If you offer a discount to PCUG members and are not in this list, please contact our advertising manager listed on page 2.

BUSINESS	SERVICES/PRODUCTS	PHONE/FAX/EMAIL	ADDRESS	DISCOUNT
Accountants				
Peng Lee BA, BEc(ANU), FCA Chartered accountant Registered tax agent Holder of Certificate of Public Practice	Accounting and taxation services *A fee schedule published 1 year in advance will be forwarded upon request*	Ph: 6258 0156 Fax: 6258 0157 Mobile: 0419 625 801 Email: leep@pcug.org.au	6 McGuiness Place McKellar ACT 2617	10% discount off the published fee schedule to PCUG members
Lesley Piko Certified practising accountant, registered tax agent	Personal and business taxation services General accounting services	Ph: 6288 8888	Suite 1 17 Trenerry St Weston ACT	15% discount off quoted fee
Books				
Collins Booksellers	A wide selection of computer titles for the novice and also advanced computer user	Ph: 6251 4813 Fax: 6251 3926	Belconnen Mall	10% discount off computer book purchases only
Daltons Books	No. 1 for computer and business books	Ph: 6249 1844 Fax: 6247 5753	54 Marcus Clarke St Canberra City	10% off RRP of computer books
Computer related				
ACT Valley Computer Repairs	Repairs, upgrades, new systems, software installation. Low rates Open 7 days	Ph: 6294 2592 Mobile: 019 323 435		10% discount on upgrades and repairs
Amalgamated Business Machines		Ph: 6280 4887	65 Kembla St Fyshwick	5% discount on repairs
Bettowynd & Taltech Solutions	Prompt, guaranteed, fixed price repairs to monitors and terminals	Ph: 6239 1043	Unit 5, Centrecourt 1 Pirie St, Fyshwick	5% discount
Capital Simulations		Fax/message: 6258 0110	PO Box 329 Belconnen ACT 2616	Free postage and handling (normally $4) and 2 free modem opponents 'wanted' notices (normally $10)
The Cartridge Factory		Ph.: 6295 5935	Canberra Business Centre 49 Wentworth Ave Kingston	10% discount on remanufactured laser toner cartridges 10% discount on inkjet refill kits No discount available on new ink or toner cartridges

BUSINESS	SERVICES/PRODUCTS	PHONE/FAX/EMAIL	ADDRESS	DISCOUNT
Computer related (cont) Clarion Database Systems	Computing consulting Business applications development Software sales	Mobile: 041 108 7754		10% discount off RRP on Microsoft and other vendors' products and consulting services
Hi-Micro Computers		Ph: 6280 7520 Fax: 6280 7540	6/18 Whyalla St Fyshwick	5% discount on accessories and upgrade installation
L & S Associates		Ph: 6257 7555	69 Paterson St Ainslie	Special price on any Microsoft product: dealer price plus 5%
NCH–Swift Sound	Email to wav Professional voice overs, music and SFX for multimedia, IVR, games, software	Ph: 6281 6124		25% discount to non-corporate members
Nullarbor Electronic Publishing		Ph: 6248 6656 Fax: 6248 9590 Email: nep@nullarbor.com.au www.nullarbor.com.au		5% discount Web/Winhelp, publishing and training
PE Computers & Software Solutions	New systems Upgrades Hardware and software installation, setup and home PC support Software tuition including Win95 and Internet software	Ph/fax: 6258 9806 Mobile: 015 484 711 Email: pelliott@pcug.org.au		5% discount on all new systems and upgrades 20% discount on installation, tuition and home PC support
Rob's Computer Help Desk	Telephone and on-site help for *all* your computer and support needs	Ph: 6292 3211 (24 hours/7 days)		5% discount on consulting services
The Software Shop		Ph: 6285 4622	42 Townsend St Phillip	5% discount off our already low prices
Sproatley Computer Services Pty Ltd	Upgrades New and used PCs MYOB specialists Software installation 24 hour help desk	Mobile: 0412 231 224 Fax: 6231 3605		10% discount on all services
Michael Vetz	Home PC support available for all PC problems including upgrades and tuition at your place – all hours	Ph: 6251 2184		Discount of $25 per hour – maximum charge $50
WinBBS Australia (Doohan OK! BBS (ACT))	Windows-based BBS featuring the latest Web browsers, anti-virus software, games and demos, and electronic versions of PCUG in Adobe Acrobat format plus much more! Operating 24 hours per day, 7 days a week.	Ph: 6242 8696 or 6265 6752 Fax: 6234 0400 Mobile: 0411 508 169 Email: webmaster@dynamite.com.au Dial-up number: 6241 1323	'Belongapedi' 2/13 Murrung Cres Ngunnawal ACT 2913 Canberra, Australia	Free life membership to PCUG members when membership number quoted to the SysOp (usually $10–$20). Call for details.
Other ANU Union Asian Bistro			Upstairs, Union Building, Union Court, ANU (next to main meeting venue)	Union member discount on PCUG main meeting nights **ONLY**
Aspect Computing Education Services		Ph: 6247 7608	86 Northbourne Ave Braddon	10% discount
Australian Management Control		Ph: 6285 4888	Suite 4, 32–36 Colbee Court, Phillip	5% discount on recordkeeping and payroll courses
Net Maths Tutor	Email-based maths tutoring service provided by experienced teacher (high school to uni level)	Ph: 6258 4791 Email: plavers@canberra.teknet.net.au www.teknet.net.au/~plavers/		10% discount

Members' Ads

FOR SALE

Modem
Maestro 33.6Kbps Executive External fax modem with box, power box, cords and manual. As new. $200 ono.
Chris Beckhouse. Ph: 6297 1042
Email: c-beckhouse@usa.net

Hard disk
Metropolis 1 Gigabyte SCSI hard disk. $150. Brian Reiss. Ph: 6231 8905

WANTED

Computer, modem, printer
Pre-loved but outmoded equipment requested as donation to major project by Aboriginal Tent Embassy to bring together a Gathering of Elders in Canberra. Embassy and Friends seek a computer, modem and black and white printer. Please rummage in your attics for old neglected gear! Modest funds could be raised for fax/scanner too, eventually – please advise if available.
Honey Nelson. Ph: 6248 5016
Email: honey@pcug.org.au

PC Users Group Membership Application / Renewal

Annual Fees Applicable (☑ one)

☐ General[1] $ 50
☐ Concessional[2] $ 25
☐ Corporate[3] $130
☐ Additional Corporate[4] $ 50
☐ International (Air Mail) $130

Notes
1 General membership covers all members of a household except for BBS and Internet access. Two month waiting period applies to Internet access.
2 Concessions apply to full time students and pensioners.
3 Corporate Membership covers up to three nominees.
4 Additional Corporate nominees may be added at $50 each.

I am paying by (☑ one)

☐ Cash (if paying by person)   ☐ Cheque to *PC Users Group (ACT) Inc*

☐ Credit card — Bankcard, Mastercard or Visa

Title	Given Name	Surname
Organisation (if applicable)	PCUG Membership Number (if applicable)	
Postal Address		
Phone (h)	Phone (w)	Concession Type (if applicable)
Credit Card Type / Number	Expiry Date	Signature

I would like to (☑ one or more)

☐ Become a new member for _____ year(s)
☐ Renew for _____ year(s)
☐ Change my address details
☐ Change Corporate nominees
☐ Take my address off advertising list
☐ Access the Bulletin Board (BBS)

Reasons for Joining ☑ (one or more)

☐ Sixteen Bits Magazine   ☐ Training Courses
☐ The Internet Project   ☐ Advice and help

Other _____

TOTAL PAYMENT DUE   **$**_____

Please Post your application with payment to:
PC Users Group (ACT) Inc
PO Box 42 Belconnen ACT 2616

Additional Corporate Membership Nominees

Title	Given Name	Surname
Position (if applicable)	Phone (h)	Phone (w)
Title	Given Name	Surname
Position (if applicable)	Phone (h)	Phone (w)

The Help Directory

The people in this directory are *volunteers* so please observe the times given. The Help Directory is designed to help individual users and should not be used as a substitute for corporate support calls to vendors! This service is provided for *members only*. Please quote your membership number to the helper. For those helpers with an asterisk *, messages may be left on the BBS in either the General message area or as a Netmail message on 3:620/243. Send updates to *pcug.editor@pcug.org.au* or via post to the PCUG Centre.

Subject	Name / Email	Phone	Days	Times
Access for Windows	Graham Fry	6288 3138	All days	7.30pm - 8.30pm
Assembly Language	Thomas McCoy	6294 2226	Mon - Fri	8.00pm - 10.00pm
Audio	Peter van Runt	6288 5556	Mon - Fri Weekends	All day 12noon - 8pm
AutoCad	Geoffrey May *	6295 5942	Mon - Fri	4.00pm - 5.00pm
AutoCAD Rel 12, 13 and LT	Neil Moffat	6292 7108	All days	Noon - 10.00pm
BASIC + Machine Language	George McLintock	6295 6590	All days	8.30pm -10.00pm
Bluewave	Jorge Garcia	6282 2681	All Days	7.00pm - 9.00pm
Batch Files, TSRs, Utilities	Bill Ghysen	6287 1234	Mon - Fri	8.00pm - 10.00pm
Braille transciption (Duxbury and Megadots)	Carolyn Simpson *ryn@effect.net.au*	6241 0705	All days	Anytime
Bulletin Board Service	Michael Phillips *	6253 4966	All days	7.30pm - 8.30pm
Chinese Star for Windows	Peng Lee	6258 0156	All days	1.00pm - 9.00pm
Clipper	Cedric Bear	6258 3169	All days	7.30pm - 8.30pm
Excel	Graheme Fry	6288 3138	All days	7.30pm - 8.30pm
Flight Simulation	Roger Lowery *lowery@pcug.org.au*	6258 1583	All days	Anytime
Free Agent / Agent Newsreading	Allan Mikkelsen	6278 3164	All days	Noon - 9.00pm
Front Page	Peter Tilbrook *webmaster@dynamite.com.au*	6242 8696	All days	Anytime
General Help	Brian Gosling	6259 1116	All days	7.30pm - 8.30pm
GEOS/GeoWorks	Phil Jones	6288 5288	All days	6.00pm - 10.00pm
Hardware	Anthony Glenn	6288 8332	All days	Anytime
HDK	Lis Shelley *lis@nullarbor.com.au*	6248 6656	Mon - Fri	7.30pm - 8.30pm
HDK	Ivana Leonard	6231 4169	Mon - Thu	7.00pm - 9.00pm
Internet Explorer (Microsoft)	Peter Tilbrook *webmaster@dynamite.com.au*	6242 8696	All days	Anytime
Internet (Netscape, Eudora)	Carolyn Simpson *ryn@effect.net.au*	6241 0705	All days	Anytime
ISR CADDSMAN Modeller (Win)	Neil Moffat	6292 7108	All days	Noon - 10.00pm
Lotus Ami Pro 3 / Word Pro 96 ed	Peter Tilbrook *webmaster@dynamite.com.au*	6242 8696	All days	Anytime
Microstation Cad	Andrew Novinc	6258 1907	All days	6.00pm - 10.00pm
Midi	Peter van Runt	6288 5556	Mon - Fri Weekends	All day 12noon - 8pm
Modem Communications	Michael Phillips *	6281 1980 or	All days	7.30pm - 8.30pm
Noteworthy Composer	Andrew Purdam *apurdam@pcug.org.au*	6230 2231	All days	Anytime
OS/2	Andrew Acton *aacton@pcug.org.au*	6293 1684	All days	9am-9pm
OS/2	Dave Thrum *davet@ozemail.com.au*	6201 8806	Mon-Fri	8am-6pm
OS/2	Michael Lightfoot *	6258 8185	All days	7.30pm - 9.30pm
Scream Tracker 3 (3SM) / MOD Music	Chris Collins	6258 8276	Mon - Fri	7.30pm - 9.00pm
Small Business Computing	Nick Thomson	6241 3239	Mon - Thu	7.30pm - 9.30pm
SuperBase	Paul Blair	6288 3584	All days	7.30pm - 9.30pm
Telix	Michael Phillips *	6281 1980	All days	7.30pm - 8.30pm
SCO Unix & Xenix	Jeremy Bishop	6291 0478	All days	7.00pm - 9.00pm
Unix	Michael Lightfoot *	6258 8185	All days	7.30pm - 9.30pm
Turbo Pascal	Michael Phillips *	6281 1980	All days	7.30pm - 8.30pm
WinBBS Australia	Peter Tilbrook *webmaster@dynamite.com.au*	6242 8696	All days	Anytime
Windows 95	Graeme Challinor *gchallin@pcug.org.au*	6236 8166	All days	10.00am - 4.00pm
Windows 95 (basic help)	Carolyn Simpson *ryn@effect.net.au*	6241 0705	All days	Anytime
Word 6 & 7 (Mac or PC)	Carolyn Simpson *ryn@effect.net.au*	6241 0705	All days	Anytime
Word for Windows	Lis Shelley *lis@nullarbor.com.au*	6248 6656	Mon - Fri	7.30pm - 8.30pm
WordPerfect 5.1 DOS, 6.1 Win	Gayle Scott *gayles@pcug.org.au*	6254 1579	All days	7.30pm - 9.30pm
WordPerfect for Windows	Peter Tilbrook *webmaster@dynamite.com.au*	6242 8696	All days	Anytime
WordStar	Dave Hay	6258 7310	All days	7.00pm - 9.00pm

October 1997

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			Internet SIG PCUG Centre *7.30pm* **1**	Sixteen Bits Commercial Ad deadline for October **2**	Layout Day for 16Bits *10.00am* **3**	TRAINING DAY PCUG Centre *9.30am* M.Y.O.B. **4**
New Members' Night PCUG Centre *7.30pm* **5**					TRAINING DAY PCUG Centre *9.30am* Introduction to Windows 95 **11**	TRAINING DAY PCUG Centre *9.30am* Internet: Full Access Introduction **12**

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
New Members' Night PCUG Centre *7.30pm* **6**	**7**	**8**	**9**	**10**	TRAINING DAY PCUG Centre *9.30am* Introduction to Windows 95 **11**	TRAINING DAY PCUG Centre *9.30am* Internet: Full Access Introduction **12**
Internet Day-time Demo and Discussion SIG PCUG Centre *10.00-2.00* **13**	Coffee and Chat PCUG Centre *10.00am* C /C++ SIG , PCUG Centre *7.30pm* **14**	Committee Meeting PCUG Centre *7.30pm* **15**	OS/2 SIG IBM Building 8 Brisbane Ave Barton *7.00 for 7.30pm* OS/2WARP **16**	**17**	Internet Clinic 9.30-1.00pm TRAINING DAY *9.30am* MS Explorer *1.30pm* Internet: Full Access Intro **18**	TRAINING DAY PCUG Centre *9.30am* Introduction to HTML **19**
Internet Day-time Demo and Discussion SIG PCUG Centre *10.00-2.00* 16 Bits Stuffing and Mailing PCUG Centre **20**	Delphi SIG PCUG Centre *7.30pm* **21**	**22**	Linux Usrs Grp Room N101 Computer Science Dept ANU *7.30pm* Investment SIG PCUG Centre *7.30pm* **23**	**24**	TRAINING DAY PCUG Centre *9.30am* Internet: Full Access Introduction **25**	TRAINING DAY PCUG Centre *9.30am* Introduction to Windows 95 **26**
Main Meeting Manning Clarke Theatre 1 Crisp Bldg. ANU *7.00 for 7.30* Bytes SIG Asian Bistro ANU *6.00pm* **27**	Coffee and Chat PCUG Centre *10.00am* **28**	**29**	Networks SIG *(Call 241 2399 for venue)* **30**	Sixteen Bits Article deadline for November **31**		