This month in

SIXTEEN BITS

Features

Profile

PCUG News & Services

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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 4911for bookings.

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📧**The INTERNET Project**
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http://www.pcug.org.au/pcug/

💻 **Bulletin Board Service (BBS)**
(02) 6253 4933 (5 lines 33.6k bps)
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.

New Members' Information Night

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

Editor's Desk Top

Anne Greiner, Managing Editor

Well, I know appearances are not everything, but I expected an outcry this month about the appearances of Sixteen Bits last month. Nary a word! Either there were no objections, or no one even noticed that there were touches of cerulean blue scattered about throughout the text. One sincerely hopes that the first option is the more likely J We've made a few more changes as well. I've updated some of the photos, most supplied by the authors with the exception of Mike Burke who was 'caught' by Brad van Wely at the Centre on the last layout day, and one or two that I swiped from homepages, so I take no responsibility for the authenticity of most of the images. If anyone writes me an article, they may choose the accompanying image, but be warned, I know what Sean Connery and Pierce Brosnan look like and will recognise any

blatant substitutions. Myself, I rather fancy using a picture of Katherine Hepburn – cheekbones to die for, my dear.

This is a bumper edition, lots of terrific articles, including Jeremy Bishop's fantastic treatise on the many and varied reasons for modem misbehavior. I notice that he omitted the most common one, i.e. that it's just being bloody minded, one that I will by no means rule out For instance, all of a sudden, between 6.00pm when I checked my mail with absolutely no problems, and 11.30pm, when I checked to see if anyone was fading away from unrequited love of me, no shutdowns, no reboots in the interim, only to find that something had badly upset Jemimah (Puddleduck, she's only a 233, hence the sobriquet, and she utterly refused to negotiate a valid connection with TIP. It took me a day and a half and some sensible advice from a friend to come to the conclusion that it was probably the script that had fallen over. But why do such a

thing when all I was doing was typing an article? Bloody mindedness is the inescapable conclusion.

Not only are there some terrific articles this month (and a couple already for next month), in this issue are also the audited accounts that have given us so much heartache over the last few months. I have printed them in full for the benefit of the membership, and also the jpegs of a letter from the auditor, explaining some of the delays. I know the quality is not the best, but if anyone wishes, I can make available electronic copy later on when deadline pressure is not on.

For all of you who will have gone on holidays before the next edition comes out, have a healthy and happy holiday, and come back refreshed and rearing to go. 1999 is going to be a good year.

President's Letter

Anne Greiner

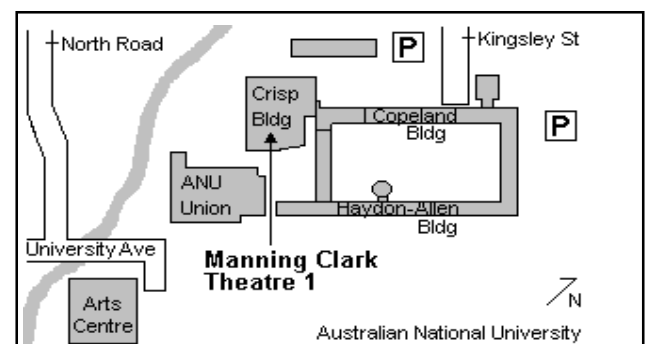This is the first letter I write as president rather than president elect, even though I have anticipated the changeover on Monday 30 November at the close of the adjourned AGM by several days.

Alleluia – we now have two sets of accounts, one for PCUG and one for TIP, both of which have been accepted by the committee, and both of which have been audited, and both of which have been signed. This has been a difficult year, and there has, for various reasons, been a high turnover in committee members. If I have learnt anything in the last year, it is that being a committee member in an organisation such as the PCUG is not an easy task. Because of the size and complexity of the group, the job description lies somewhere between volunteer and professional, and our membership, and rightly so, requires a very high standard

of performance from the officers which it elects to run the group and conduct it's business. Unfortunately, the mere act of volunteering does not guarantee the competence of any individual, and it is extremely important that each of us remembers this, and makes full use of the committee structure that is able to weld together a group of disparate individuals into a cohesive and effective team. We must remember to leave past grudges where they belong, and not to rake over old embers to dredge up justification or retribution for past events. We must have the courage to admit when we are out or our depths, and seek the help of the group, rather than hope it will all work out in the end. In short, we must become a team.

Since the AGM in September which had to be adjourned because of the lack of audited accounts to present to the

meeting, there have been a few other minor incidents. Memorable among them was the failure to show by the representative from Corel, booked to speak at the main monthly meeting. I received a somewhat incoherent phone call from Goulburn to say that he was ill, and when I phoned next day to enquire, was told that he had a really nasty virus, and that a member of his family had had to drive from Sydney to collect him as he was too ill to drive. Both he and Corel have apologised, and we will rebook early in the new year.

There will be a number of changes this coming year, and we will keep the membership up to date, both through Sixteen Bits, and through a short report from the committee at main meetings.

As I said in the editorial, have a wonderful Christmas, and may 1999 be healthy, happy and successful.

Anne Greiner

Main Meeting

Monday 30 October 1998

Bring & Buy (&sell)

computers, software, bits & pieces

The main meeting this month will be the Bring and Buy, to be held at the PCUG Centre at Northpoint Plaza.

The Albert Hall was not available this year on the 30th, so we decided to change the venue rather than the date, so come alongand enjoy a social get together, and if you wish to dispose of all those electronic dust gatherers, ring Ann Byrne and organize a table.

Santa will be there for the rugrats –

Sausages and soft drinks on sale for every one–

Anything stronger should come in your own eskie :–)

Letters

Hello Anne.

I've just had a memory upgrade at PC Connections, choosing them largely on the basis of your recommendation in 16 Bits.

And very pleased I was, too. Anyway, I asked them if they had read your plug in the magazine. Apparently not. So I took in the November issue and your column was photocopied (I hope there's no copywrite infraction here) by a very pleased little group.

It's the old thing of plenty of complaints but few compliments which people dealing with the public have to put up with. (Or up with which they have to put).

Regards,
Mike Purcell

All too true in many cases, but my case (and yours too by the sound of it) was a really positive experience
Ed.

Dear Editor

I read with much amusement Ockham's Razor on the "trouble with the metric system". As the Commonwealth Member on the Metric Conversion Board (and indeed one of the few surviving members), I feel obliged to comment on the article though to do justice to the issues raised would require an article as long as the original.

Decimal currency is not part of the metric system; if it a "Standard Dollar" would be kept in each reference laboratory around the world and economics would become an exact science perhaps!

Marcel asks why we could not have a hybrid system of measures in Australia. He should read the Senate report, and all the submissions which were published over 30 years ago. Various options, including a decimalised imperial system,

were considered and rejected largely because they would lead to exactly the sort on confusion in which he found himself.

All reference labs. would have had to maintain two sets of reference standards as they did prior to conversion. He talks of the imperial system as an "evolved" system and the metric system as having "revolutinary origins'. That is hardly a convincing argument for a hybrid system even if it were true. T

The metric system we use, the SI or Systeme International, has also evolved through international discussion. It has the great attraction of being far more co-herent than the imperial system and is, if anything, easier to use since you do not have to remember lots of odd factors.

Some of his statements are wrong. For instance, aircraft on which I have travelled have reported altitudes in metres; in fact, they do not fly at a fixed height but rather at a fixed barometric pressure (in hectopascals not inches of mercury!).

There were many objections to the change even after it was started. I particularly liked the letters we received which said "why don't you wait until after all we old people have died then leave it to the younger generation!" One generation had to take the plunge and it happened to be ours! I could submit a full article on the topic if you wished but I doubt that many people really care these days.

Paul Free
paulfree@pcug.org.au

Dear Editor

Ann Byrne asked some important questions regarding the AGM in the November issue of Sixteen Bits.

When the auditor's staff advised the Treasurer that the audited financial statement could not be ready for the magazine or for the AGM, they told him that they had already given this information to the Acting President.

The Acting President did not discuss this advice with the committee, however by the time that the auditor withdrew the hope that the financial statement could

be ready in time, it was already too late to get that information to the membership.

The Treasurer had no difficulty in preparing the accounts for the financial year under report. The difficulty that the auditor had with the accounts was in reconciling the accounts for the year 1997/98 with the accounts for the previous years.

Members will recall that the accounts for the previous years were made up on the basis that PCUG was the sole owner of The Internet Project.

Because TIP was set up under an agreement made between The Canberra Chapter of AUUG and the PGUG in 1994, and because AUUG itself and AUUG members had contributed considerable assets to TIP, the 1997 AGM recognised that the audited financial statement presented to that meeting must be wrong, and instructed the committee to put the accounts onto a correct basis and to establish the degree of ownership of the two organisations in TIP.

After the resignations of two previous Treasurers, in February 1998 the Committee eventually appointed Basil Chupin as Treasurer and instructed him and myself to provide the accounts and the ownership information to the committee as early as possible.

While Basil organised the 1997/98 accounts onto an accruals basis of accounting, I set about reconstructing the TIP accounts transaction by transaction from November 1994 to June 1997.

It was not possible to take short cuts in this process because the agreement with regard to purchase of assets for TIP had not been followed. For most of the period subscriptions to TIP had not been distinguished between AUUG and PCUG members. There were many instances of confusion between assets purchased for TIP, inventory purchased for resale by the PCUG, and assets which were supposed to be purchased by one of the parties but which were in fact purchased by the other.

Quite apart from following the instructions of the 1997 AGM, it was necessary to register the assets correctly for insurance purposes, as the listings held by our insurance company were quite inadequate and demonstrably inaccurate.

The agreement made in 1994 between AUUG and PCUG may have passed inspection by our solicitors, but even if it had been followed it would have made it difficult to account for TIP as a separate entity.

Because the agreement was not followed, accounting for TIP as a separate entity, with ownership by AUUG and PCUG established in the account was an impossiblity.

Nor Greg Baker, nor Coopers and Lybrand, nor Hugh Alston, nor our Auditors made any attempt to account for TIP as a separate entity. When I attempted to reconstruct the TIP accounts within the terms of the agreement I realised why those predecessors had not even attempted the task.

The auditor advised that an agreement that set up TIP as a Joint Venture between the parties would enable an accounting as a separate entity, so I outlined my intentions to our committee and to the IPMC and set about the reconstruction of the TIP accounts and the TIP Asset Register and a draft agreement that would enable TIP to own the assets that it required to operate and which would dispose of the assets between the parties on an equitable basis in the event of TIP being terminated as a joint venture.

In May the two committees accepted the reconstructed TIP accounts, accepted the respective ownerships established in them, accepted the distribution of equities necessary to enable PCUG to continue operating without having to borrow more money from TIP, but was unable to agree the terms of the draft agreement on the basis of which those accounts had been reconstructed.

Basil incorporated the PCUG ownership of TIP into the accounts that he had taken over, and whereas it might have been desirable to reconstruct the PCUG accounts in the same manner as the TIP reconstruction, it was clearly impossible to do so if a September AGM was to be attempted. In fact my advice to the committee was to delay the AGM.

The accounts were supplied to the Auditor in the first week of August.

It was not until a week before the AGM that the Auditor detailed his problem of

reconciling the separated PCUG and TIP 1997/98 accounts back to the combined 1996/97 accounts.

His problem with the accounts did not relate to the 1997/98 period. His problem was a $90,000 discrepancy in the 1994/97 accounts. It is my belief that this discrepancy arose because of the way in which M.Y.O.B. deals with end of year and beginning of year adjustments, resulting from the keeping of the accounts on a cash basis and bringing assets other than cash to account on 30th June and removing them again on 1st July. The 'historical balance' that M.Y.O.B. creates to enable this operation is difficult to check, and I believe it was in this process that the discrepancy crept in.

Better that than a discrepancy arising from fraud, though it was unfortunate that the distorted accounts concealed the true financial position, and that apart from its equity in TIP, PCUG was losing money fast without being aware of the nature of the leakage.

The current treasurer did find fault with the previous accounts. They must have been incorrect. They showed the whole of TIP as belonging to PCUG. We all knew that this was not the case.

Members of the committees that produced those errors should not now attempt to divert attention by blaming the present treasurer. Peter Watney

Editor's note:
I have printed Mr Watney's letter in full, as it is his right to be heard, although I have some serious problems with the content. I believe that it contains errors of both judgement and perception, as well as factual errors. I commend to your notice the letter from our auditors that is published as a jpeg file in this issue which deliniates some of the problems we have faced this year.

Dear Editor
Peter Watney circulated his "reply" to Ann Byrne's letter to the editor published in the November issue of 16 Bits to the existing Committee (ie, not the Committee elected at the AGM).

I was, and am, disappointed that some important questions asked by Ann have not attracted any response from the Treasurer, nor even from Peter, but only more of Peter's "crusade" on the presentation of the accounts. I was tempted to simply shrug off the "reply" as being just more of the same. Unfortunately, Peter is continuing to perpetuate a number of myths that have to be addressed if the membership of the PCUG is not to be misled.

Myth 1: Reconciliation of the 1997-98 accounts with the audited accounts for 1996-97 is the auditor's problem; not the PCUG's or the Treasurer's.

Wrong. Reconciliation of the accounts is NOT the auditor's job, it is the Treasurer's task. Accounts are not simply concoctions for any one year. They should present a continuum from one year to the next. Accounting and other policies can, of course, change and different presentations of accounts can result. But there should be information presented in the accounts to show where the differences lie and why. That is not something for the auditors to prepare. If it needs to be said, their role is to audit.

And despite Peter's statement that auditor's problems did not relate to the 1997-98 period, that is not my understanding from discussions with the auditors

Myth 2: The 1997 AGM recognised that the accounts for previous years must be wrong with regard to TIP.

Wrong. The actual motion initially put by the then Treasurer, Hugh Alston, at the 1997 AGM (which I seconded) was that:

"that this meeting accept the financial statements for the year ended 30 June 1997, subject to the following:

1. That this meeting take notice that the financial stake of the Australian Unix Users Group in The Internet Project is not recognised in the financial statements. 2. That this meeting directs the incoming Committee to assess the financial position of the Australian Unix Users Group in The Internet Project, to include that assessment in accounts of the Association in the current financial year, and to report that outcome at the

next annual general meeting and as soon as possible in 'Sixteen Bits'."

The motion was amended to include another item:

" and 3. That the incoming Committee seek appropriate variations to the Agreement between the PC Users Group (ACT) Inc and the Australian Unix Users Group in relation to the financial management of the Internet Project."

The motion was put and carried unanimously, so that the 1996-97 accounts were accepted.

Now you might say that it is splitting hairs to say that what was put and carried differed from Peter's interpretation of it as being somehow a recognition of wrongness in the accounts. But the 1996-97 accounts were accepted by the meeting, not something that would have happened, I am sure, if enough, or any, present (including Peter and Basil who were there), thought that they were wrong.

Myth 3: The TIP accounts had to be reconstructed from 1994 to 1997.

Not so. There are a number of ways in which the assessment of the financial position could have been undertaken. Peter's reconstruction of the accounts is one way, perhaps the most costly financially and in terms of time, but not the only way. And there are ways of presenting the assessment in the accounts other than that adopted by Peter and the Treasurer that could have preserved continuity from previous accounts and not led to the present position of an extremely expensive audit.

The Motion carried at the 1996-97 AGM required assessment - it did not require reconstruction of accounts.

Myth 4: The Agreement between PCUG and AUUG on TIP made it impossible to account for TIP.

Not so. The Agreement was not written around the need for accounts, that is clear, but it was sufficiently clear in wording and expressed intention to enable accounts to be established and maintained.

Myth 5: The TIP and PCUG asset registers were confused.

I have had a look at both these 1996-97 asset registers and the 1997-98 TIP assets register in trying to get an updated 1997-98 PCUG asset register to the

auditors, something that has been neglected by the Treasurer but which was going to attract an audit qualification. Peter in fact prepared the 1997-98 TIP asset register. And I'm blowed if I can see the "many instances of confusion" he cites.

Hopefully, this will clear up some of the myths.

Yours sincerely
Rod Farr

Hello Anne
You may have noticed that a new TV ad for Microsoft's Internet Explorer e-mail programme uses the musical theme of the "confutatis Maledictis" from Mozart's Requiem.

"Where do we go today?" is the cheery line on the screen.

Meanwhile the chorus sings:
"Confutatis maledictis, flammis acribus addictis,"

which means, " The damned and accursed are convicted to the flames of hell."

I couldn't have put it better myself :-)

Allan Mikkelsen

Love it - "I'll put them on the list. they'll none of them be missed" (sung by the Lord High Executioner from the Mikado) Ed.

Dear (Agony Column?) Editor
In the October edition of *16 Bits* I wrote that I would give solutions to the puzzles in the Puzzle Corner two months after their publication, to allow for late entries etc. I thought the puzzles I hunt down and compile for the Puzzle Corner were designed to keep *most adults* occupied for a respectable period of time.

But now Phil McFadden tells me that he took 9 minutes to solve the October puzzles and I have received (correct) solutions from 8, 9 and 10 year olds!
Where do I go from here?
Yours etc.
Puzzled and Perplexed
(vicbus@pcug.org.au)

WALTER ◆ TURNBULL

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5 November 1998

Anne Greiner
President (elect)
PC Users Group Inc.

Dear Anne

Re: Comments Relating to Audited Accounts

Thankyou for passing onto me certain comments relating to our letter requesting further fees for the audit of PCUG for the year ended 30 June 1998. The comments raise some issues which we feel it would be beneficial to respond to immediately.

Prior Years Financial Statements

Since the commencement of the Internet Project (TIP) and up until 30 June 1997, the income, expenditure, assets and liabilities of TIP have been disclosed as part of PCUG's financial statements. This was financial statements disclosure purposes only, as for most years the accounting records of TIP and PCUG were separately maintained.

The comments you provided me state that "proper accounting was rendered impossible by a badly flawed document". We agree that the agreement between PCUG and AUUG does not provide a definitive answer as to the accounting relationship between PCUG, AUUG and TIP. However, the intent of the agreement needed to be interpreted to identify the nature of the relationship. The main options in arrangements such as this would be to recognise TIP as either:

• a partnership between PCUG and AUUG;
• a joint venture, with PCUG and AUUG as the joint venturers; or
• an activity of PCUG, of which AUUG has some interest

We believe it is highly unlikely that the arrangement could be classified as a partnership, and there would be potential taxation implications if it was. Therefore the only two remaining options are a joint venture or an activity of PCUG. Both of these treatments would be considered valid given the information available.

PARTNERS

Don Water B.Comm, CA, AIA   Andrew Turnbull B.A.(Acct), CA, CIA
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Bruce Papps B.Bus(Acct), CA   Glenn O'Sullivan B.Ec, CA
Steven Baker B.Comm(Acct), CA   David Watson FCA, IPA

However, as stated above, in prior years the accounts of TIP have been recognised as an activity of PCUG and disclosed in PCUG's financial statements. The main implication of this treatment was that AUUG's share of the income and assets of TIP were not directly shown in the financial statements. However the following points should also be recognised:

• the assets and liabilities of TIP were separately disclosed in the notes to the financial statements;
• a separate statement of income and expenditure for TIP was provided;
• an accounting policy note stated that the income of TIP included AUUG members subscriptions, and that the liability for unearned income included AUUG's share of income; and
• we insisted each year that the liability for unearned income be recognised in PCUG's financial statements which meant that surpluses shown for TIP were conservative. Given the disclosure of this liability, it is difficult to accuse the Committee of not having adequate information upon which to make decisions.

Whilst the Committee is responsible for the financial statements, the auditor needs to make a judgement as to whether the accounting policies adopted are reasonable. Up until 1997 we have accepted that the agreement between PCUG and AUUG makes it very difficult to establish the nature of the relationship. We consider that the Committee's interpretation of the agreement was reasonable, and this was translated into accounting policy. Therefore the financial statements as presented were reasonable.

Further, as AUUG's members only contribute approximately 3% of the total TIP income, the financial statements are materially correct anyway. The only items in dispute would be ownership of assets, and it is our understanding that as part of the break-up of the relationship, AUUG only requires one low value asset to be returned.

1998 Financial Statements

For the year ended 30 June 1998, the Committee has decided to present separate financial statements for TIP. This can only be practically done as a joint venture. Presenting TIP as a joint venture has the following implications:

• TIP cannot earn income from the sale of internet access hours as joint ventures can only produce "output" for the use of the joint venturers (as per the Australian Accounting Standard dealing with joint ventures, AAS 19);
• the joint venture will incur the costs of TIP but needs contributions from the joint venturers to meet the costs; and
• TIP will have a liability to the joint venturers for the monies received on their behalf from the sale of internet access hours.

Disclosing TIP as a joint venture requires a change in accounting policy and journals to be processed for the transfer of opening balances etc. One of the main problems we have had is that the Treasurer reconstructed the accounts going back three years, and

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then posted journals against opening balances and accumulated surpluses to reflect this reconstruction.

As the past years financial statements of PCUG have been certified by the Committee and adopted at Annual General Meetings, no changes to closing balances and accumulated surpluses can be made. Therefore significant effort has gone into establishing the adjustments necessary to present the accounts correctly.

General Comments

We hope that the above explanations provide some understanding as to the accounting policies and financial statement disclosures adopted by PCUG over the past years. We believe that there are valid arguments for either of the two methods for disclosing TIP as discussed above. We certainly do not believe that the Committees of PCUG have ever deliberately attempted to conceal errors or provide false information, and we believe that the Committees have acted in good faith. Any accusations to the contrary are serious and should be dealt with by the Committee through the appropriate means.

In our role as the auditors, each year we have made judgements as to the reasonableness of the accounting policies and disclosures adopted by PCUG. As already discussed, there is no "black and white" answer to the disclosure of TIP and therefore we have formed an opinion each year that the financial statements are presented fairly. This is in the context of the Australian Accounting Standards (including materiality) and the accounting policies adopted. Any suggestion that we, as auditors, have attempted to conceal errors is totally unacceptable and any further suggestions of this nature by members of PCUG will result in appropriate action by our firm.

In relation to our extra fees, we believe these to be entirely reasonable given the additional work required this year. In fact, we have probably under estimated the extra time required. As we stated in our letter to you, we anticipate that the fees should reduce to more reasonable levels next year as TIP will be fully disclosed as part of PCUG again.

If you, or the Committee, have any further questions in relation to the above, please contact me.

Yours sincerely

Bruce Papps
Partner

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The Rosetta Page
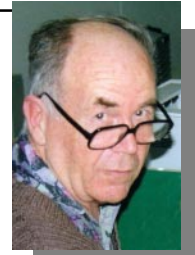
…by Don Nicol

"The telephone line will never ever carry a signal faster than 9600 baud!"

Professor Boothanikl was the acme of intelligence. He was the Grand Pooh-Bah of the physics world. He was the cream's cream of fact and truth.

Was it any wonder, then, that I was first on the queue and sunk my last dollar into the 9600 baud modem when it was finally developed. Here was a machine that would never be superseded. Here was a machine that would see me out to the end of my days. Here was I on the very edge of the ultimate in technology.

"Necessity " they say "is the mother of invention." And history has proved the professor wrong. My severe disappointment in learning of the Mr Boothanikl's fallibility was a big lesson. Primarily because it hit hard at my hip pocket nerve but, more significantly, because it undermined my faith in words like "truth" and "reality". "Never ever" lost its meaning for me the moment the next modem upgrade was announced.

There has been a lot of discussion recently about the cost of the year 2,000 conversion (Y2K). I like to follow this story because it gives some indication of the cost of change brought about by operation of "necessity". The Y2K conversion is a minuscule matter when considered in the scheme of computer technology yet its cost is no laughing matter. How would you feel if "necessity" were to require of you that you replace all of your software? Is such a thing possible? I don't know, and I don't know anyone who can assure me on such a question.

I don't know why professor Boothanikl was so emphatic about the 9600 baud limit. I do know that he made the statement using a long string of erudite mathematics but I was too ignorant (and too disinterested) to want or need that particular piece of knowledge.

Similarly, I do not know why the IRQs in my computer are limited to 16. However, I suspect that 16 is not enough. Yes! I do know that there are other devices available, but I wonder whether these alternatives are permanent solutions or merely band-aid remedies to a problem (like Y2K) that will have to be squarely faced sooner or later.

"Why is 16 not enough?" you ask. The organic brain uses millions of IRQ's. If science continues to try to get computers to emulate the functioning of the organic brain and hurdle the barriers to parallel processing then hundreds; if not thousands of IRQs will need to be included in the architecture of each machine. The effect on us drones in the community is that we will have to continually spend money on new and expensive innovations if we want to keep pace. Let me try to explain by example:

Let's suppose that the next goodie to be introduced to the computer market is a device that will enable me to talk real time to a foreigner who does not understand my language? This could be the next "necessity" for an international businessman who might willing to pay big bucks for it. With the advent of such a device anybody who would seek to keep pace (perhaps to get or keep a job) will have to buy a copy. Such a device may require a very different computer to the one that we are using today. The following sentence was passed to Russia in the testing phase of one of the earliest computer assisted translation packages "The spirit is willing but the flesh is weak!". When request was made for it to be reversed the message came back "The Vodka is fine but the meat is off!" Language translation requires knowledge of idiom and dialect as well as base language, the word "schooner" would probably bring a different image to the mind a Sydney listener than that of a man from Melbourne. You don't have to be an expert in linguistics to know that real time language translation would require significant processing power. Is this the "necessity" that will force computer engineers into a fundamental recast of machine design?

Perhaps the more significant question should be: "How much will it cost me if the computer industry should decide to dump the ponderous architecture that we now know as 'IBM'?" A significant change in architecture might render all of our software redundant. The Y2K cost would amount to a drop in the ocean if such were to be the case.

How far can we go with the current IBM architecture? I have a feeling that the elastic has been stretched to its breaking point. But then again I don't know. There are a lot of innovative people out there who are working on some pretty wonderful ideas. You know that your latest computer will not retain its value for more than a couple of years. Are you sure that you won't be tossing your latest software into the garbage bin at the same time?

Also, if a multiple number of product-designs were to appear on the market at the same time how would we, poor mortals, be able to choose the one that will survive (remember the Beta VCR; remember the Commodore; the Microbee; and the PS2)?

As a youngster I promised myself that I would not grow up to be a crusty old cynic.

Note: Names used in this page are fictitious.
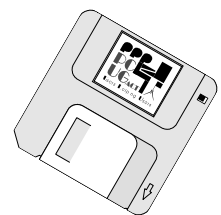
Membership Notes

...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 December 1998
> **RENEW NOW**
> **to avoid losing access to**
> **The Internet Project.**

Your Membership Card

Your membership card and, for new members, a New Member's Information Disk, will normally be mailed to you on the third Monday of the month in which you join or renew your membership. Those who join or renew after the third Monday will receive their card/disk the following month. 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* and it will be replaced without charge..

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.

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.

As a further service, one month before your membership is due to expire, I will send a reminder letter with a renewal form on the reverse. This letter, printed on paper of a *very* noticeablecolour, should arrive a day or so before *Sixteen Bits.*

> **Next New Members' Night**
> **7 December 1998**
> **7.30pm**
> **PCUG Centre**
> **Northpoint Plaza, Belconnen**

@LAW
DODGY BROS. 1

…by Geoff Purvis-Smith

We've all heard the horror stories about dodgy dealers and problem products. We also know that there are reputable dealers who will acknowledge problems immediately, and rectify them as soon as possible. But what happens when the dealer fails to address the problem, puts up the shutters or even absconds with our deposit? What can we do? What remedies are available? How do we get our money back or our purchase fixed? What are our rights????

Unfortunately, there are dealers who simply have no intention or means of supplying the products that they promise. They don't have the product (and never will), they supply an inferior product at a higher price (by deception, mistake or recycling), or their product is defective (in the sense that it is broken, incompatible or downright shoddy).

There are laws to protect the unwary (or the unlucky) from such dodgy dealers. Purchasers in the ACT are protected by laws such as the Sale of Goods Act, the Trade Practices Act and the Fair Trading Act. In most cases, consumers would rely on the Sale of Goods Act as it contains specific provisions about the supplier's failure to deliver or supply goods that are defective or unfit for the purpose for which they were purchased. Other legislation deals with misleading, deceptive or unconscionable conduct.

To make sure you are protected, you need a valid, binding contract with the seller. A contract may be oral or written. Where possible, it is best to have your agreement in writing as this generally makes your rights clear. In a formal sense, the contract is created when:

- the seller has agreed to sell;
- you have agreed to buy;
- and one of you has acted to your detriment (in the sense that you have agreed to pay some money or the salesperson has ordered the product).

Every contract has implied and express terms. Express terms are terms that you have specifically raised with the other party. A breach of a term may be sufficient to terminate the contract, get your money back and even get damages if you suffer financial loss.

Whether you are purchasing for yourself or a small business, you should follow these guidelines:

1. Write down your current system details (including all its components and

their specifications) and your requirements. Be as specific as you can. If you want to run the latest games or work with massive spreadsheets with macros the length of your arm, write it down. If the product is essential to your business, explain why. Take copies of what you have written down. Leave the original at home.

2. Shop around. Visit a range of stores. Visit the same store more than once to get to know the staff.

3. Show the salesperson your requirements, and ask them to provide a free written quote which includes their name. They should be happy to supply a quote which states that the product they will supply is compatible with your system or requirements and that if it isn't, that they will give you a refund or a similar, compatible product in its place. If they'll write the quote on the actual slip of paper with your requirements, that's terrific. If they'll only quote on their own stationery, get them to write down that they have quoted on the basis of the attached specifications. They should also sign or initial the specifications.

4. No reputable dealer should be unwilling to supply the 'suitable or a refund/replacement guarantee'. However, they may impose obligations such as the product should be returned in its original condition and packaging. Provided their conditions are reasonable, this shouldn't be a concern.

5. Ask them about warranties, licences and manuals. Make sure that you are happy with the warranty that is offered. Are repairs done in your home or business, in the shop or by the manufacturer? Ask whether they guarantee a certain maximum repair time. Make sure you will be supplied with the latest product (not just 'Windows') and that you will receive genuine licences.

6. The supplier should also state how long it will take to supply the product. If they don't supply the product within that time they may be technically in breach of the contract. Whether you can break the contract at that stage will depend on whether you informed them that you must have the product by a certain date. By telling them this, you have made time an important condition. If you have not specified a date, they need only supply the product within a reasonable period. If you need the product to meet contracts for your business, tell the supplier this.

7. If you have to pay a deposit, pay as little as possible. Ask the salesperson what the minimum deposit is. 5% or 10% is a reasonable amount. Never pay the whole amount before you actually get the product. If you are able to pay by credit card - do so. Some credit card companies will refuse to pay the supplier if they fail to produce the goods.

8. Finally, don't sign anything that purports to take away your rights to sue under legislation. There are some laws that cannot be contracted out of, but why give the seller any ammunition in an argument? Also, be wary of clauses that say 'no reliance can be placed on representations'. If you see one, insist that it be deleted and attach the signed quote.

If you are purchasing for government, you should check whether your department or agency already has a standing offer arrangement in place with particular suppliers, and whether the requirement is within or outside the scope of any outsourcing arrangements your organisation has in place. If appropriate, you should also make sure that you have followed the requirements of the Financial Management and Accountability Act and Regulations and the Commonwealth Procurement Guidelines: Core Policies and Principles (http://www.ctc.gov.au/publications/purchasing/cpg/cpg.htm).

Once you have the product home, make sure you know how to install it properly. If you are unsure, pay extra to have it installed or ask for written directions from the salesperson. Follow the directions exactly. If the product won't work - ask for advice. Don't be shy about this - customer support is part of the deal when you buy a product. Failing to follow directions may void your warranty.

Next month's article will discuss how to get problems fixed or your money back.

Geoff Purvis-Smith is a litigation and information technology solicitor with Clayton Utz Canberra. He provides advice on IT issues to individuals, companies and the government. He can be contacted on (02) 6274 0803.

File recovery in Word 97

…by Greg Baker

To avoid the frustration of losing written work it is important to regularly save your Word 97 document as you work.

This is simply a matter of going to the **File** menu and selecting **Save** on a regular basis.

In addition as a precaution against the loss of work it is possible to automatically save backup copies of files in Word 97 as you work.

In the event of a system or Word 97 failure the automatically saved documents are recovered for you and brought onto your screen the next time you start Word.

This feature of Word is called *AutoRecover*.

To turn on this feature in Word 97 go to the **Tools** menu and select **Options**.

In the Options dialog box select the **Save** tab and then check the box to **Save AutoRecover info**.

To the right of that box enter or dial up the frequency in minutes of the AutoRecover saving process.

It is also a good idea to check the **Allow background saves** box so that the saving process can take place as you work rather than interrupting you.

You will need to make a judgement about how often you want the AutoRecover process triggered.

The longer you make the time between AutoRecover saves the more work you will potentially lose if the system or Word 97 fails.

However it is probably not necessary to save more often than every ten minutes.

Ten minutes is also the Word 97 default value.

Two points of caution however are in order.

The AutoRecover process is no substitute for regularly saving your work.

In addition AutoRecovered documents may not be the most recent version of your work if you are regularly saving. It is thus very important to check that the recovered document is indeed the most recent before you save it with the same document name as your original file.
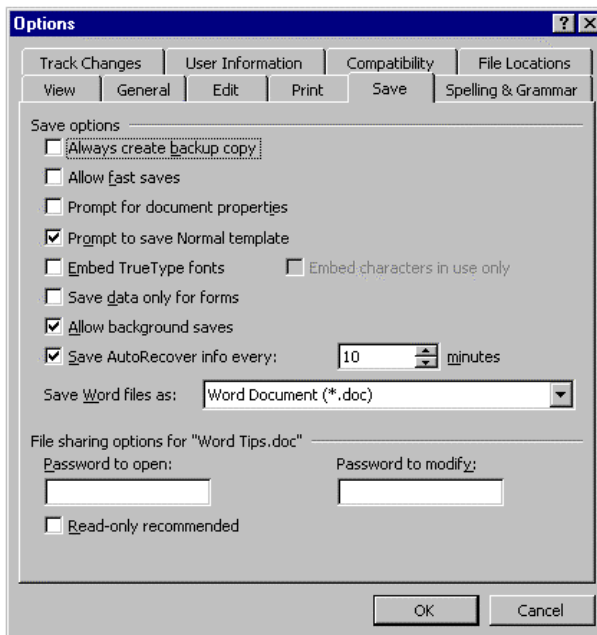
SECURITY

...by Glenn Pure

Glenn.Pure@pcug.org.au

The setting was a dark night in medieval England. Sleet and rain were hammering on the weary traveller's back as he approached the castle gates. He was thinking about the warmth inside and relief from the revolting weather, as much as the important message he had to deliver. The guard shouted an order that he identify himself and then: "what is the password?"

I don't know how good my historical facts are here, but nevertheless, passwords *have* been around for a very long time. It's amazing to think that with all the sophistication of computers, software and networks today that good, old-fashioned passwords still provide the main form of security against intruders in a very large number of computer systems.

OK, so why are they still around, and are they really any good as a means of security?

Well the short answer is that they aren't too bad, but only if implemented properly. Even so, I suspect the main reason they are still with us is that they are so simple and easy to implement.

Effectiveness of password systems depends on a number of obvious factors. One is the quality of the password itself. Is it easily guessed? For example, is it so short that there aren't too many possi-bilities of what it could be, thereby risking compromise? How easy is it to remember? If the owner is likely to forget it, then that causes other very real and obvious problems.

While the *quality* of passwords might be determined by probability theory, the choice and memorability of passwords is more about human behaviour, and these 'human' aspects are absolutely critical to effective password security

Unfortunately, I suspect that computer scientists are the ones who design and develop password control systems.

There are also some less obvious factors that have an influence. Don't forget that passwords by themselves are useless. To work, there have to be systems to store them, link them with user accounts, and link them with the access control systems actually in place in the computer system. In other words, passwords are part of an integrated security system. These other components are the basis of some very effective attacks on systems secured by passwords.

Because password-based security has been around for so long, a lot of thought has gone into their attack. One method is quaintly called the 'Trojan horse'. It works like this. The first step in a password system must be the means for the user to enter the password. This is usually a login screen or the like.

A Trojan horse is a dummy program that presents the login screen to the user, just like the real login program, but the Trojan horse steals the password and stores it away somewhere. The only thing the person who planted the Trojan horse

Password: ✕✕✕✕✕✕✕✕✕✕

has to do now is sneak in (either in person or remotely from another computer) and retrieve the password.

In a similar vein, an attacker can eavesdrop on the 'conversation' that occurs during the login process to steal the password. Early computer systems allowed this type of attack because they transmitted to password unprotected

(also called 'in the clear'). All computer password systems today encrypt the password as soon as the user has entered it in order to prevent this type of attack.

Even encrypted, the password is not safe. On a shared computer system, the system has to be able to verify users who provide their password. The usual method for doing this is to store all the passwords in ordinary file, along with the name of the account owner. To protect this information, the passwords are stored in encrypted form also. But even using the most powerful encryption systems, this infor-mation is not safe. There is a classic (and still widely used attack) based on the old adage "if you can't beat 'em, join 'em". Instead of trying to decipher the pass-words, the attacker simply uses the same encryption process to encrypt lots of words and compare them with the results stored in the password file. Attackers start with a 'dictionary' of normal or likely words (such as common first names and words such as "password" or "pass").

This type of attack is called a dictionary attack. It is surprisingly, and worryingly effective. In some systems, a third or more of the passwords have been guessed. An obvious defence against this attack is to make sure users select 'good' passwords that can't easily be guessed.

Another means to foil the dictionary attack is to store the password file so that it can not be accessed. Shadow files are an example (but don't ask me to explain them because I don't know!). This is the type of protection you will find on systems such as the Unix machine that runs TIP. All TIP account holders have their pass-words protected from prying eyes by being stored in a shadow file, as well as being in encrypted form.

Security for computers and networks is now big business. This is only natural since so many people and organisations are now heavily reliant on computers for storage of lots of important information about themselves, their families and their financial affairs. As a result, considerable effort has been put into developing newer, more effective security systems.

The first, and key, step that any security system has to perform is to accurately identify (authenticate) the person attempt-ing to gain access. There are three primary approaches that can be used. People can authenticate themselves through:

· *knowing* some secret that no-one else knows (eg, a password)

· *possessing* something special and unique (eg, a smart card with a unique and secret serial number or some other private 'token')

· *being* unique, that is, having personal attributes that are unique (eg, a fingerprint).

All three approaches are the basis of security systems. The most topical at present are probably the authentication systems based on personal features such as fingerprints or retinal patterns (called 'biometrics'). However, it may well be a while before they become widely used. Biometric systems certainly solve many of the problems with systems that rely on the user knowing a secret or owning a token. But in some cases they simply shift the problem or create new ones.

In a password system or a token-based system, the computer terminal (or other hardware) where the user enters their details usually does not have to be 'trusted' for the computer system to verify that the person gaining access has the correct password or token. This is because such systems rely solely on the information that was provided, not the way it was entered. However, biometric systems usually have to rely on trusted hardware for entry of the user's details.

To illustrate, take the case of a fingerprint-based system. Unless the computer system can verify that the fingerprint data was entered by the user actually placing their finger on a trusted scanning device, the fingerprint data may have come from an attacker who simply intercepted an earlier authentication session by the user and replayed it. (There are actually some ways around this but they are not perfect either).

To me though, a bigger worry exists. In the fingerprint example above, what happens if your fingerprint details become known to an attacker and he (or she) can now forge them, as in the example above, or maybe by printing your fingerprint pattern on a thin rubber glove that he places on his hand. What do you do once your fingerprint details are compromised? Get a new set of fingerprints? Clearly in a password or token-based system, the user just gets a new password or token. Not so with biometrics.

Biometric systems have a great deal to offer, but as you may now realise, considerable care and caution is required to use them. I would personally be wary about using such a system.

The plain old password still has a lot going for it, but how can it be made more effective? To answer this, I'll take a look at what makes a good password, but not just from a statistical perspective. I'll also cover some of the variants of password that have been proposed.

In terms of 'ordinary' passwords, the main problem is the obvious one of striking a balance between making them hard for an attacker to guess but easy for the owner to remember. The hardest password to guess consists of a random string of characters, for example "k3u609wl3". Research has established the obvious that these are also very difficult for users to remember. In one study, no one in a sample of people could remember a random password after three months (except those who wrote it down, rather than trying to memorise it).

It seems that if a password can be pronounced, it is a lot easier to remember. All the same, the recall rate for pronounce-able passwords was still fairly poor: almost two thirds of a test group couldn't remember such a password after three months.

The best types of pronounceable pass-word are not real words. An example might be "iluvu" (I love you). Passwords that mix letters and numbers are also good, but probably not as easy to remember.

One way to improve a password is simply to make it longer. The laws of probability tell us that the more characters in the password, the harder it will be to guess, especially if it isn't a proper word.

Another approach is to use a *phrase* instead of a single 'word'. A phrase may well use ordinary words, and therefore be easy to remember, but because it combines multiple words, it is a lot harder to guess. The best passphrases are ones you have made up yourself, not stolen from a song lyric, poem or the like. A good one would be a silly phrase your child thought up (if you don't have children, you'll have to look elsewhere!).

Only some password systems will accept passphrases. Others may not accept them at all, but give you no warning! For example, a computer system might just ignore anything the user enters after the first eight characters. So in the example, if you chose "bumblebee come to me", everything after "bumblebee" would be ignored. It's easy to check of this is happening. Try changing your password to a passphrase. If it is accepted without complaint, the next time you use the passphrase, try dropping off the final character when you enter it. If it still works, then you have a system which limits the length of the password/phrase you can enter. A little trial and error will enable you to work out the maximum length without too much trouble.

There are some substantial variants of the simple password system. At least two such systems have been proposed: *cognitive* passwords and *associative* passwords. They are interesting because psychologists have shown that, at least in some
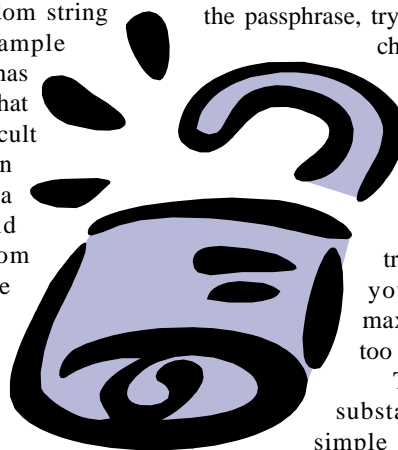
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circumstances, users find them a lot easier to remember. I'm personally not aware, though, of any computer or software systems that has implemented these alternatives.

Cognitive passwords are entered by users in response to a series of questions. The questions may be the same for all users of a system but the answers would only be known by the user. Questions can request factual information or opinions. For example, a 'factual' question might be "what is your mother's birth date?". An 'opinion' question might be "what is your favourite drink?". Users would have to answer a series of randomly chosen questions before they were authenticated. Of course, the answers to each of the questions in the full set would have to be supplied by the user when they first had their account created.

In an early study, recall rates after three months were typically in the 70 to 90 percent range. The recall rate for the factual information was substantially better. The factual-type questions have problems, though. As for the fingerprint biometric example, what happens when the inform-ation is compromised? The answers can't just be changed (at least not without eroding the advantage of making the answers easy to remember). A superficial conclusion is that the opinion-based questions have more promise.

The other password variant that has been tried is the *associative* password. Like cognitive passwords, these rely on a series of prompts being presented to the user, with the user expected to provide a response. A certain number of correct responses will authenticate the user. The prompts and responses are each a single word. The user creates the prompts and responses themselves with the aim of selecting pairs of words associated with one another. For example, a prompt might be "grand" and the user's response might be "prix". Clearly, there are many possible associations that people may have with the word "grand". Another user might respond with "mother". One way to improve ease of memory with associative passwords is to suggest users adopt a theme when they select the associations. In the "grand – prix" example, the theme

might be motor sports and the other prompt – response pairs would fit this theme. Another prompt - response might therefore be "gravel – road". Users would have to be careful not to give away the theme with their choice of prompts.

In the same study mentioned above about the memorability of cognitive passwords, it was found that after three months, about 60 % of users were able to remember 14 or more correct responses out of a set of 20. However, there was considerable vari-ability – some people had very good recall and one user failed to remember any.

Users also liked associative passwords. They were ranked second as the preferred type of password. (The good, old-fashioned single password was still selected as the preferred type - but only if users got to choose the password them-selves).

A more recent study showed a consider-ably lower recall rate for associative passwords. Worse still, the recall rate in this study had fallen to low levels after only two weeks.

It's not yet clear whether or not cognitive and associative passwords offer better security than ordinary password, or what future there is for them. A lot more work will be needed before they can be serious competitors for the simple password, if ever. Perhaps the biggest hurdle, though, is that computer science and not human behaviour still figures more prominently than it should in the design of computer security systems. A fruitful area where some cross-disciplinary research should be pushed, I'm sure.

It seems that whether you love 'em or hate 'em, the humble "***********" is sure to be with us for a while longer…

Ockham's Razor

Privately owned cars still dominate the roads with the majority of people being reluctant to use public transport.

Transcript:

Robyn Williams: Have you ever stood by the roadside, waiting for a bus perhaps, and counted how many cars have only one driver? It comes to about 75%. Especially during rush hours.

Despite the fringe benefit tax, many companies still give some staff motor cars as perks. It cannot be an efficient way to get about town. That, anyway, is Andrew Herrick's opinion. He's a carpenter and philosopher who is exercised in today's talk about problems in Melbourne, though he could be talking about a number of our capital cities, with the exception of Hobart and Darwin which, so far, seem spared.

Andrew Herrick: In heaven there are no bumper-to-bumper traffic snarls, no red lights, no fuming over the wheel, raised fists, petrol queues, or smog. In heaven, sweet music shall serenade us as we cruise smooth highways through landscapes of bucolic splendour. At least this is the image of motoring Nirvana proffered by the media whenever the products essential for happy motoring, not least the cars themselves, are dangled before we h a p l e s s commuters as a route to freewaydom, a release from the reality of our wheels of clay. It's an alluring, technophilic fantasy, precisely the kind of motile autonomy promised by the age of the car. And despite reality, it's an enduringly successful dream, that each year adds 50-million new vehicles to a world wide fleet of almost 600-million, a figure surely even beyond the dreams of 1950s Detroit.

General Motors promotional film from that decade graphically displays the roots of this dream. As Detroit's prognosticators were in the driver's seat, so to speak, their vision was prescriptive as much as predictive. The car was our future, so of course the future would need to accommodate the car. Providing tomorrow's high density populations living in three-dimensional cityscapes with personal transport meant that two-dimensional road networks, however efficient, would need to become 3-D too. Tomorrow's soaring skyscrapers became celebratory maypoles, festooned with ribbon-like freeways along which Central Casting's canoodling couple blithely cruised in their smooth and gleaming vehicle along roads curiously devoid of other traffic, though GM presumably intended to sell more than one car per metropolis. But what, or who, was it imagined would reside at the base of this soaring, manufactured landscape? Being beyond their transport brief anyway, the marketeers simply fudged it, and concealed the pillars supporting their pantheon to the car behind veils of mist. And ironically, these grey areas were a potent metaphor for the real future, though it was clearly not a future that Detroit wanted to consider. For our destination was automotive heaven, not the other place.

The enduring power of this '50s dream is evidenced by its successful updating, in the idiom of car salesmen, into the '90s and beyond. It's this same autocentric boosterism that is behind Melbourne's latest monster road expansion scheme, a project initially promoted by the Victorian government with a campaign that graphically portrayed the city as a central heart, complete with blood vessels radiating to suburban extremities.

It was not simply through concerns over this bizarre approach to traffic management philosophy that I found striking. It was guilt. Almost 18 months earlier, I had, in a somewhat heated talkback radio session, accused the Minister of Transport of sounding like the Minister for Health, after hearing him declare that the very vitality of our economy depended on the free flow of its lifeblood along our roads. Little did I know that my medical allusion would apparently prove inspirational. At the campaign's launch, the Minister went on to insist that what Melbourne urgently needed was an operation to improve traffic flow and reduce congestion. As everyone knew, the city's major arteries were becoming increasingly clogged. The government's Citylink project would not only restore its health, but also accommodate the 250,000 additional vehicles expected to be plying our roads by the year 2000. The proposed treatment: triple bypass surgery, featuring two tunnels under the Yarra River. Cost: $2-billion.

Melbourne's exasperated corpuscular commuters could wave bye-bye to the crush of capillary travel and join the healthy rush of blood that would flow through the city's expanded arteries, if only the government, scalpel poised, was given their informed consent.

However trite, I had meant to compare this approach with modern medicine: high-tech, high-cost, and too often apt to treat the symptoms, not the causes, of an ailment. Over time, Melburnians had seen roads widened or duplicated in order to improve traffic flow, within a year or two re-clogged, rather like the arteries of a hypertension sufferer who refuses exercise and a low fat diet. The wide-ranging costs of this technological tail-chasing had most recently become apparent in the outer eastern suburb of Ringwood, where the orthodox shoehorning of freeways into Melbourne's vestigial river valleys had seen the construction of a bypass to relieve a local traffic 'thrombosis' simultaneously excise the area's last remaining lung. Yet another act of radical surgery apparently subverting the interests of the organism by accommodating its disease.

The reactionary doctrine that ever more cars, indeed more transport per se, must be in our society's vital interests clearly ignores the fundamental structural inefficiencies of road transport and its

King Car: The Essential Tyrant!

enormous social and environmental impact. It seems obvious that if our suburbs and cities were not designed to be so car-dependent, then we would not be so dependent on the car. Extending the government's medical metaphor, perhaps the modern city has just become too big to rely on a single, central heart at all. A cursory study of morphology suggests that as organisms evolve to mega proportions, multiple hearts, valves and brains become essential to efficient function.

There are obviously practical limits preventing road networks centrally mimicking the venous system's fractally increasing scale, one hopes. The body must be well supplied with oxygen, and a city with opportunities for exchange. But a healthy organism, or city, that succumbs to pressure to expand its transport networks, invariably condemns its heart to unhealthy decrepitude and a slow demise. Dependency on large trunk routes also means that a single abrupt thrombotic incident can block a major artery, inducing a catastrophic traffic stroke.

Despite such daily emergencies in our cities, the car remains fixedly ascendant, now accounting for more than 90% of urban travel. We now have twice as many vehicles on our roads as there were 20 years ago. Do we seriously imagine that 20 years hence, there will be twice as many [Image] again? It would be reassuring to think that the city organism could control its growth and structure by intent, and not merely by reacting to the demands imposed upon it by a particularly demanding group of cells, or their lobbyists. It's perhaps time to ask a fundamental question: are we controlling the car, or is it driving us?

There clearly must be factors beyond the need to travel, even if that need is imposed by the autocentric city itself, that have made the car king. One strangely enough, may be the lingering of our love for the horse. Dashboards no longer fend off the dash from thundering hooves, but we still, for instance, delight in grooming and displaying our powerful metallic steeds. We still speak indeed, keys in hand, of going out 'driving'. Until quite recently cars were propelled by horsepower, and

surprisingly, did not actually outnumber horses in Australia until 1956. Five thousand years of equine culture, rather than vanishing in a few decades, may merely have transmogrified into car culture.

The horse itself only became practical and safe for humans to operate through technological innovation, much of it impelled by warfare. The Mongol hordes' westward demolition derby was enabled by the combined technologies of reins, saddle and stirrups, and the metal bit, with controlling protocols as ever making up the rear, until the ethics of chivalry were sought to ameliorate the profound power imbalance between horseman and pedestrian, a bias profoundly exaggerated today by machines recalling the rampant potency of the centaur -half-man, half-car. Clear the streets and lock up your daughters indeed.

Technology clearly shapes our behaviour and eventually, our protocols, as much as our supposed needs conceive and shape that technology. As the flank invites the spur or the trigger the finger, so the accelerator invites the foot. There is something almost primal about the way car and driver merge, the human merely the guiding brain inside a device purpose-built to enable superhuman speed and acceleration. If only it were the whole brain, but it's the hypothalamus, that ancient limbic region, which regulates such raw emotions as fear and anger, as well as feeding and reproduction, that is really behind the wheel. This may explain the car as sex object, graphically demonstrated whenever motor racing champions ejaculate gobbets of foaming white stuff over their fans from bottles held to their groins.

With the human limbic system designed however, for the highways and byways of 3-million years B.C. however adaptive we humans are, stretching that adaptability to keep up with galloping technology is a clear cause of modern stress. Added tension comes from knowing that however relaxed we become

behind the wheel, whatever lounge-room comforts or life support systems our car boasts, we are always, at least subliminally, aware of what the merest flick of the wheel by ourselves or passing strangers, can wreak. This stress is amplified when the car's physical constraints prevent its driver responding as nature intended to the primal reflexes of flee or fight.

There can be no modern circumstance more exasperating than to be mired in traffic, in a machine designed for blinding speed, being farted at by the car in front, getting nowhere fast. It's probably a combination of this curtailment of potency, and the frustration of expectations raised by a freeway mindset, the growing gap between the dream and the reality, that is behind the road rage phenomenon. Cursing 'all those idiots on the roads' may be appropriate in this arena of poised chaos and carnage, yet we don't consider sharing footpaths with these same sociopaths nearly as fraught an experience. Here again, the medium, or the vehicle, is the message. It's just possible indeed, that car culture has insidiously influenced our general social behaviour. By far our greatest number of exchanges, however brief, occur while driving, though these are of course quantity, not quality, engagements. Relationships require communication, and road lexicon is inevitably restricted to a crude, and often rude, shorthand. Could a sense of community atrophied on the one hand by television, and on the other degraded by road culture's deep defensiveness, help explain the pervasive angst of our times?

Whenever forward movement has priority over peripheral space, even the fundamental process of travelling itself can become a chauvinistic act. The evidence that every road is a kind of tunnel, channelling consciousness as well as traffic, is apparent even in our cliches. We speak, for instance, of 'going from A to B', implicitly ignoring what lies between the two, whereas we might better speak of travelling from A to C and have a care for the effects of our passage on B. But then, so often getting there, and fast, is all that
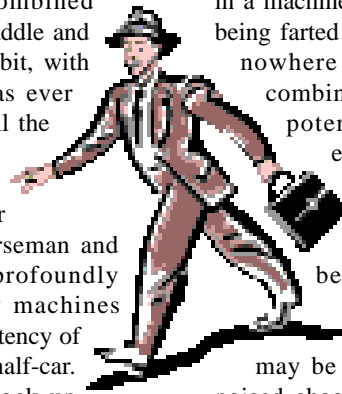
counts, and damn the big picture, and damn the pedestrians.

The status of this most original form of transport has so diminished with the autofication of our public space that the carless have literally become an endangered species. Except in shopping malls, which ironically boast safe havens for pedestrians while creating around them territory where snorting cars reign rampant. The private vehicle is now so psychologically eminent as to allow many drivers to forget that they are still engaged in public transport, while distinguished by their car from other members of that rather too inclusive club. The increasing rarity of pedestrian traffic may even have a more sinister effect on our social psyche. Within a car-obsessed culture, the rare pedestrian, denuded of the status conferred by a metal carapace, may be seen as fair game by the turbocharged centaurs

of our time. This compounds the last and most bizarre aspect of our late 20th century fantasia. We actually feel safe in our cars, when sadly the reverse is true.

Last year in Victoria, three people died when travelling by train, a means of transport widely perceived with dread, while over 300 violently perished on our roads. Our tolerance of this carnage to the point of mundanity can be seen as equivalent to the 12th century peasant's fatalistic shrug at pillage by Mongol cavalry. It is a measure of the power of our tyrant, the car, that we see the advancing hordes, but refuse to see that they are us. Though few remain unscathed by road trauma, we are so dependent, so fixated on this technology, that even here, reality fails to intrude on the myth. We continue to grit our teeth, rev our engines on the grid, accelerating white-knuckled towards a Utopia that recedes as fast as we

approach it, unaware that for many of us, heaven awaits just around the bend.

Robyn Williams: That melange of motoring metaphor came from Andrew Herrick, philosopher and carpenter. And of course, as you noticed, he walks the streets of Melbourne.

Guests on this program: Andrew Herrick Carpenter and Philosopher, Parkdale, Victoria

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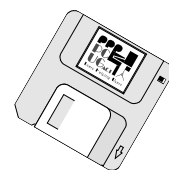
THE INTERNET PROJECT

…by Allan Mikkelsen

The upgrade of the PCUG terminal server kryten to provide extra lines and 56K modem connection capability has not gone as smoothly as hoped. Unfortunately, some members are still having difficulties connecting or staying connected. Jeremy Bishop has written "TIP modem problems - a troubleshooting guide" and anyone with problems is urged to peruse this document. It is available in the TIP newsgroups, on the TIP web site, and (for those unable to connect), in hard copy at the PCUG Centre. The TIP volunteers are actively working to solve the problems, but please note the word "volunteers". The simplest way to have your problem relegated to the end of the queue is to abuse the volunteer working on it.

Future changes to access will include installation of V90 modem support when the code is out of beta and we have reports that it is stable on the Cisco AS5300. The timetable for installation will be announced in the tip.announce newsgroup so please read this group regularly. If you don't know how to access and read newsgroups, perhaps it is time to consider attending one of the PCUG training courses.

On the subject of reading, please read carefully any messages sent to you by automatic TIP systems. If your TIP access is cut off, it is usually for one of three reasons:-

- your group membership has expired
- your TIP subscription has expired
- you have run out of hours

For the first two, we automatically send email warnings that this is soon to occur. Please remember that TIP subscriptions and PCUG memberships are processed separately and please note which one the warning applies to. We have cases of people whose PCUG membership expiring and paying another $120 for TIP access and being quite irate when their access is denied.

For hour usage, we do not know what warning you need, so each user who is likely to run out of hours must set warning levels for their own account. You can set up to 4 warning points, and an email is sent to you when your hours drop below each trigger. See http://www.tip.net.au/tip/warnset.html to set trigers and find out more information.

On a lighter note, Jim Fogg has been posting a series of "wanna" links to the tip.* newsgroups. These have now been collected (with other links) and included in the Coffee and Chat web area - see htpp://www.pcug.org.au/pcug/candc/cclinks.htm for some amusing sites.

Allan Mikkelsen

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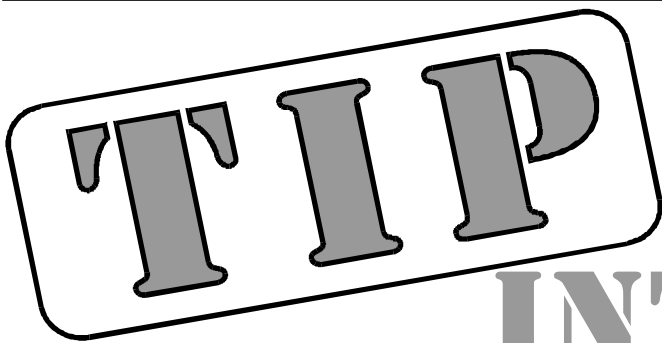
MODEM PROBLEMS...
(WHO, ME?!)   *...by Jeremy Bishop*

For those of you having problems with modem connections to TIP, line dropouts, and associated login problems, particularly as a result of the recent upgrade to the AS5300 access server (for PCUG users), I have spent several, if not many, hours today putting together the following notes and troubleshooting tips, which I hope will be of interest and use. Constructive comments and corrections are welcome; please post them in the tip.help newsgroup, or email them to me: jeremyb@canb.auug.org.au.   TIP MODEM PROBLEMS I have divided the TIP modem and login problems into 5 main categories, primarily based on modem speed and modulation. I suggest you identify the description(s) of the problem(s) that most closely matches your problem(s) and skip to the relevant section(s), rather than reading through the entire article. 1) 56k modems (a) line dropouts (b) stable, but connecting at 36k-52k (c) stable, but connection at 33.6k or less (d) Maestro K56flex BUSY signal handling 2) V.34+ (33.6k) modems (a) KTX 33.6k modems (b) line dropouts (c) stable, but connecting at 31.2k 3) V.FC/V.Fast modems (28.8k) (a) line dropouts (b) stable, but connecting at 14.4k 4) Other modems (all speeds) (a) line dropouts 5) Generic problems (all modems) (a) "Username prompt" problems (b) Delay in logging on

56k m odems

(1) 56k modems (a) Line dropouts (i) Work through _ALL_ the items in the "Line Dropout Checklist" (http://www.tip.net.au/tip/help/hdropout.htm). Yes, it was written in the days of Windows 3.1/3.11, but most, if not all, of the advice is still good today. (ii) Work through _ALL_ the items in the "Line Dropout Checklist" again, just to be sure you didn't

skip any the first time :-) (iii) Double check to make sure you are using a 16550A (or fully compatible) UART chip. Yes, I know this is mentioned in the Line Dropout Checklist, but if you aren't using a 16550A (or fully compatible) UART chip with a high speed modem, you might as well throw the high speed modem away and use a 9600bps V.32 modem. (iv) Make sure your operating system is configured to use RTS/CTS flow control (hardware handshaking), _AND_ that your modem is also configured to use RTS/CTS flow control. Yes, I know this is mentioned in the Line Dropout Checklist, but if you aren't using RTS/CTS flow control with a high speed modem, you might as well throw the high speed modem away and use a 9600bps V.32 modem. (v) Make sure that your modem is configured to use error correction. This is often _NOT_ the default setting on some makes of modem. Yes, I know this is mentioned in the Line Dropout Checklist, but if you aren't using error correction with a high speed modem, you might as well throw the high speed modem away and use a 9600bps V.32 modem. (vi) Make sure that _NO_ other devices (phones, faxes, answering machines, other modems) are connected to your phone line. Yes, I know that your phone happily shared the line with the modem prior to the AS5300 upgrade, but humour me, OK? Seriously, at least three TIP users with 56k modems and experiencing dropouts after the AS5300 upgrade, cured the dropouts by removing other devices from the line, yet these had not caused problems previously. (vii)

Force your modem to connect using a lower line (DCE) speed. Consult your modem manual on how to do this, but usually it is via an "ATF" or "AT+MS=" command in your modem initialization. By default your modem tries to connect at 56k, so change this to connect at, say, 48k. If there is no improvement, drop the speed to 44k, then 40k, then 36k, and so on, until you find a speed which results in a stable connection. (b) Stable, but connecting at 36k-52k OK, your modem connection is stable at some speed greater than 33.6k and less than 56k, but it won't connect at 56k, or becomes unstable at higher speeds, leading to dropouts. The short answer is that this is about as good as it gets. The long answer follows ... The long answer: 56k is a _maximum_ speed, and to all extents and purposes it is a _theoretical maximum_ speed. You will only acheive 56k if the physical conditions between your modem and the TIP AS5300 are _perfect_. Anything less than perfection will result in connections at less then 56k. How much less than 56k depends on exactly what the conditions are between your modem and TIP, with the biggest factors being (1) the condition of the phone line between your modem and the Telstra junction box that you plug the modem/phone/etc into , and (2) the condition of the phone line between the junction box and your local exchange. BOTH OF THESE FACTORS ARE BEYOND TIP's CONTROL !!! The physical why's and wherefore's of 56k modems are way beyond this discussion - the best I can do is give an analogy, which is that 56k

modems are like high performance sports cars. Just as there are very few roads on which high performance sports cars can reach their top speed, there are very few phone lines on which high speed modems can reach their top speeds. The analogy can be extended further by noting that whilst it _might_ be possible to reach a Ferrari's top speed on one or two ACT roads (road laws and speed limits notwithstanding), it would be impossible to do so on your local suburban streets (analogous to the connection to your local exchange). If you get a stable connection to TIP at 48k or better, then you're doing well, and better than average. If your connection is a 46k or less, then it _might_ be possible to improve the speed - run through the Line Dropout Checklist, and have a careful read of your modem manual to see if there are any initilisation settings that can be "tweaked". (c) Stable, but connection at 33.6k or less If you are using a 56k modem, but can only connect at 33.6k or less, then you may well be using a 56k V.90 modem. V.90 modulation is _NOT_ compatible with 56flex modulation (which is used by the AS5300), so your modem is probably connecting using V.34+ modulation (which has a maximum speed of 33.6k). Some of the more expensive 56k modems have flash memory, which _may_ allow you to load K56flex firmware instead of V.90 firmware - check your manual. If your 56k modem has V.90 modulation, and you can't use K56flex modulation instead, then you will have to wait until the AS5300 is upgraded to V.90 standard. At the time of writing, the V.90 code for the AS5300 is still in beta testing, and the TIP administrators have no plans to upgrade to V.90 until the code is formally released and has been successfully used by other AS5300 sites. (d) Maestro K56flex BUSY signal handling There is a known bug with some Maestro K56flex modems - they do not recognise the busy signal correctly. Whether or not it will affect your Maestro K56flex modem is hard to tell - it seems to depend on your exchange. Maestro's advice is apparently to either wait for TIP to upgrade the AS5300 to V.90 standard

(but see paragraph 1(c) above) and then upgrade your Maestro modem to V.90, or to upgrade your modem now to V.90 (which apparently does not have this bug), but this will limit you to a maximum speed of 33.6k (V.34+ modulation) until the AS5300 is also upgraded to V.90.

V.34+ (33.6k) modems
2) V.34+ (33.6k) modems (a) KTX 33.6k modems - line dropouts Based on reports by TIP users, KTX 33.6k modems appear particularly susceptible to line dropouts following the AS5300 upgrade. In addition to the advice in paragraph 2(b) below, one TIP user has reported that the problem was resolved by adjusting the FIFO buffers for the UART as follows: (b) Line dropouts with other modems (i) Work through _ALL_ the items in the "Line Dropout Checklist" (http://www.tip.net.au/tip/help/hdropout.htm). Yes, this was written in the days of Windows

3.1/3.11, but most, if not all, of the advice is still good today. (ii) Work through _ALL_ the items in the "Line Dropout Checklist" _again_, just to be sure you didn't skip any the first time :-) (iii) Double check to make sure you are using a 16550A (or fully compatible) UART chip. Yes, I know this is mentioned in the Line Dropout Checklist, but if you aren't using a 16550A (or fully compatible) UART chip with a high speed modem, you might as well throw the high speed modem away and use a 9600bps V.32 modem. (iv) Make sure your operating system is configured to use

RTS/CTS flow control (hardware handshaking), **AND** that your modem is also configured to use RTS/CTS flow control. Yes, I know this is mentioned in the Line Dropout Checklist, but if you aren't using RTS/CTS flow control with a high speed modem, you might as well throw the high speed modem away and use a 9600bps V.32 modem. (v) Make sure that your modem is configured to use error correction. This is often _NOT_ the default setting on some makes of modem. Yes, I know this is mentioned in the Line Dropout Checklist, but if you aren't using error correction with a high speed modem, you might as well throw the high speed modem away and use a 9600bps V.32 modem. (vi) Make sure that _NO_ other devices (phones, faxes, answering machines, other modems) are connected to your phone line. Yes, I know that your phone happily shared the line with the modem prior to the AS5300 upgrade, but humour me, OK? Many, many, TIP users have had line dropout problems in the past caused by other devices on the phone line, and many, many, TIP users cured those problems by removing other devices from the line. If you do have other devices on the line, which have not caused problems previously, remember that things have changed at TIP's end, and that the line characteristics between the AS5300 and your modem might be more susceptible to those other devices. (vii) Force your modem to connect using a lower line (DCE) speed. Consult your modem manual on how to do this, but usually it is via an "ATF" or "AT+MS=" command in your modem initialization. By default your modem tries to connect at 33.6k, so change this to connect at, say, 31.2k. If there is no improvement, drop the speed to 28.8k, then 26.4k, then 24.0k, and so on, until you find a speed which results in a stable connection. (c) Stable, but connecting at 31.2k Many TIP users, but NOT all, with V.34+ (33.6k) modems have reported that they are unable to connect at 33.6k, and instead can only connect at 31.2k. This appears to be a problem with the AS5300, and although one patch has been installed which was claimed to fix the problem, it

seems that this didn't work. At this stage, all we can do is wait for Cisco to identify and fix this bug. Given that it's only a 7% loss in speed, I really don't think it's worth fretting about. I would expect that this problem will be fixed when the AS5300 is upgraded to the V.90 standard, unless the fix is identified and installed in the meantime.

V.FC/V.Fast modems (28.8k)

3) V.FC/V.Fast modems (28.8k) (a) Line dropouts Please read sections 1(a) and/or 2(b) of this discussion (substituting V.FC/V.Fast/28.8k as appropriate). (b) Stable, but connecting at 14.4k There is an identified and acknowledged problem with V.FC and V.Fast modems connecting to the AS5300. Put simply, at the time of writing, the AS5300 does not support V.FC/V.Fast modulation, which means that V.FC/V.Fast modems have to "fallback" to a lower speed modulation, usually V.32bis (14.4k).
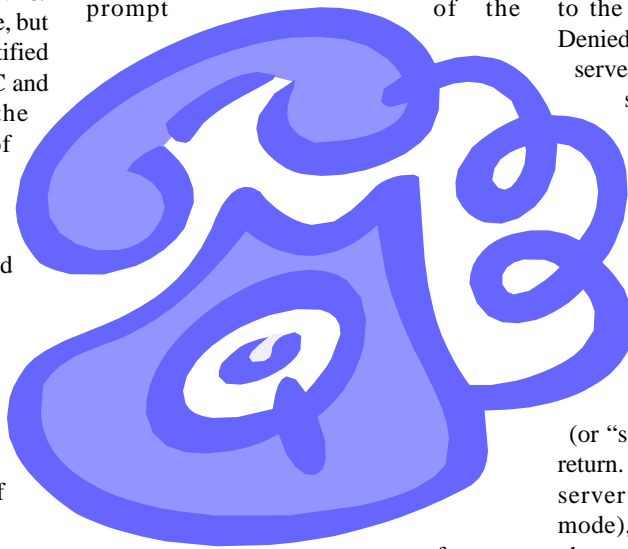
Other modems (all speeds)

(4) Other modems (all speeds) (a) Line dropouts Please read sections 1(a) and/or 2(b) of this discussion (substituting as appropriate the modulation schemes and speeds of your modem).

Generic problems (all modems)

(5) Generic problems (all modems) (a) "Username prompt" problems Some TIP users have reported problems when logging in (as opposed to making a modem connection). Although they can achieve a reliable modem connection, the login process does not complete, and for those

using the old Trumpet Winsock script, the dreaded message "No username prompt has appeared" is displayed. To understand this problem, let's look at what happens when you login to TIP. After the modems have connected, you (or your computer) needs to login (authenticate) to TIP using a username and password, to ensure that only TIP users are using the TIP modems. The TIP access servers (such as the AS5300) are configured such that once the modem connection has been established, it will send a prompt of the

form "Username: " to the remote modem/computer. It then expects a username (login ID) to be sent, immediately followed by a carriage return. Having received the carriage return it sends a prompt of the form "Password: " to the remote system, and expects the password followed by a

carriage return. Having received this username and password pair, it then sends these two strings to the TACACS server (supreme), effectively asking the TACACS server the question "Is this a valid username/password pair?". The TACACS server replies with a code indicating "yes" or "no", and the access server responds accordingly. If the answer from the TACACS server equates to "no" (because the username and/or password were wrong, or the users TIP access has expired), then the access server will reply to the remote modem with "% Access Denied". If the answer from the TACACS server equates to "yes", then the access server responds with a prompt of the form "[krytenIII 61] tip>". At this point, the remote system has a choice - they can either make a terminal connection to 'supreme' i.e. a Limited Access session, by sending "connect supreme" (followed by a carriage return), or they can start a PPP (or SLIP) connection, i.e. a Full Access session, by sending "ppp default" (or "slip default") followed by a carriage return. If PPP or SLIP is selected, the access server then switches to PPP (or SLIP mode), and starts sending PPP or SLIP characters to the remote system, and expects the remote system to begin the PPP (or SLIP) negotiation. Having explained what _should_ happen, let's consider what _could_ happen. For example, what happens if the access server never sends the "Username: " prompt? In the worst case, the remote system (or user)

will sit there forever, waiting for the "Username: " prompt. To avoid this problem, the old Trumpet Winsock script has what is referred to as a "timeout", which simply means that if the "Username: " prompt is not received within a specified period of time, that part of the script "times out", and a the "No username prompt has appeared" message is displayed to tell the user of the problem. However, many TIP users are now using Win95 (or Win98 or NT 4.0) which have built-in PPP/SLIP capabilities, and a different script language than Trumpet Winsock. Hence, users of these systems will never get the "No username prompt has appeared" warning. Now, back to the AS5300 and these login problems. Whilst this is not definite, it appears that something like the following may be occurring. The AS5300 is a faster and more powerful system than the older AS5200 it replaced, and it is possible that it issues the "Username: " prompt significantly faster than the AS5200 did, to the extent that remote

system misses the prompt because it is still processing the modem negotiation. Hence the AS5300 has sent the "Username: " prompt, and is patiently waiting for the remote system to send it a username, but meanwhile the remote system has missed this, and sits there patiently waiting for the AS5300 to send it the "Username: " prompt. Eventually one or other of the systems gets bored of waiting, and terminates the call, which may or may not result in a useful and meaningful error message on the users computer (the usefulness or otherwise of such a message will depend on the operating system, the modem, the script (if used), and which end (the AS5300 or the modem) terminated the call.

What's the solution to this? The easiest solution is probably to make a small modification to the script to send a carriage return to the AS5300 before expecting the "Username: " prompt. It doesn't matter if the AS5300 has already

sent the prompt, by sending the carriage return it will simply send the prompt again. After that, the login process should proceed smoothly. (b) Delay in logging on This problem is simply a variant of the "Username prompt" problem described in the previous section. However, instead of the login failing completely, either the AS5300 is timing out and sending the "Username: " prompt again _before_ the remote system times out and terminates its login process, OR the remote system is timing out and has "another go" at logging in, e.g. by sending the carriage return to "wake up" the AS5300 before it times out and terminates the modem connection.
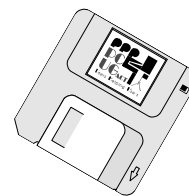
cd rom
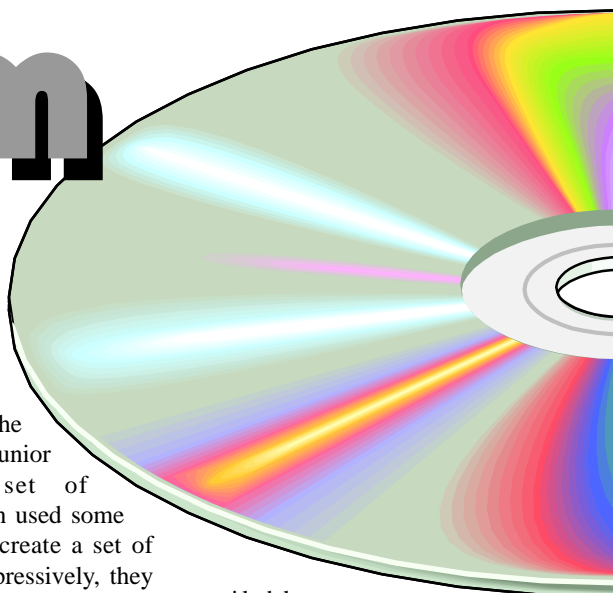
W elcome to the December 1998 edition of this column -this month I have included reviews of 4 of the 15 products that I have reviewed for InfoRom during the last month - to see the other reviews check www.inforom.com.au. It features reviews of educational, home reference and entertainment CD-ROMs.

The reviews are of Wallace & Gromit Print-O-Matic, Encarta 99 Reference Suite, Small Soldiers: Squad Commander and Mulan. Copyright for the reviews rests with InfoRom.

WALLACE & GROMIT PRINT-O-MATIC

Wallace & Gromit Print-O-Matic is another CD-ROM in the Wallace & Gromit series, based on the famous Aardman animations - this one allows you to create personalized stationery based on your favorite characters from the 3 movie-length animations. The program is flexible and easy to use, and you can mix and match characters, objects and stamps to create a range of designs and layouts. There are eleven basic items available:

• Greeting cards - birthday or whatever

• Crumb Catchers - placemats, which can include comments such as 'Cracking Toast Gromit!"

• Invitations;

• Posters;

• Gift tags;

• Gift wrap - repeating patterns of Wallace, Feathers McGraw or whoever;

• Writing paper;

• Labels - can print on gummed paper if you wish;

• Certificates - "Jolly well done!" etc.;

• * ID Cards - business cards for children (add name, address, hobbies)

• Bookmarks.

You are not limited to the above however. Two of the junior reviewers created a set of personalised placemats, then used some of the stamps provided to create a set of drinks coasters as well. Impressively, they even thought to cover all of them with clear plastic contact, so we now have a Wallace & Gromit inspired dinner table. You can add your own messages in one of the four fonts provided (including Wallace's own Wensleydale font!) in various colors.

There are blank templates available to help you get started in all of the above items, and a range of tools available to help you to add to or modify a project. Finally, your creations can be saved and then re-used or modified later.

There is online help available, as well as a 22-page user guide that provides information about all program features as well as some useful hints and tips.

Australian Distributor: R o a d s h o w New Media (Tel: 61 2 9552 8700) (Fax: 61 2 9660 8436) (http://www.village.com.au) **Format:** One CD for Windows 3.1 or 95 **Publisher**: BBC Multimedia (http://www.bbc.co.uk/education)

ENCARTA 99 REFERENCE SUITE

Encarta 99 Reference Suite is a comprehensive PC reference library that consists of 3 full products on 5 CD-ROMs - Encarta 99 Deluxe, Encarta 99 World Atlas, and Microsoft Bookshelf 99. There is also Encarta 99 Resource Centre, a separate CD-ROM with a number of educational applications, including Research Organizer, a tool for collecting and organizing research materials, and Encarta Lifelong Learning, a collection of in-depth subject guides. As a combined package, it is one of the most comprehensive CD-ROM encyclopedias

available,
and it makes excellent use of multimedia items and links to the World Wide Web.

Encarta 99 Deluxe Edition is the latest version of the popular multimedia encyclopedia from Microsoft. It comes on two CD-ROMs, and has over 32,000 articles, 13,000 photos and illustrations, over 140 video clips and animations, over 4000 music and audio clips, and over 8,500 World Wide Web links. As well as updated articles and tables, it now features an increased number of article Sidebars, which offer different viewpoints e.g. personal essays, case histories on the current article; Closed Captions, a feature that allows hearing-impaired students to access information that is held in Encarta in sound form; and Call-Out quotes, brief excerpts from articles that are meant to highlight a key aspect of element of the article.

The main features available are:

• Encyclopedia articles;

• Media features;

• Online features;

• Dictionary - quick access to spelling and definitions of words;

• Overview - an introduction to the various program features.

The screen is colorful and well laid out, with a summary of contents (you can use the subheadings within this to jump directly to that part of the article), a window for media items and the main text - which can be displayed in small, medium or large font. The menu bar includes a More Information button, that leads to

…by Nick Thomson
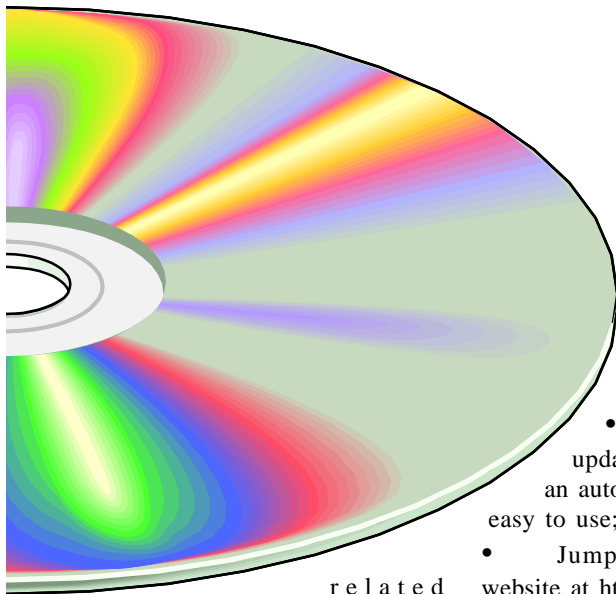
r e l a t e d articles, yearbook article updates, further reading and web links (see below).

At any time one can call up Pinpointer, a user-friendly search tool that allows you to search by article title, word, subject category (such as Life Sciences and Geography) or multimedia item. It includes an optional wizard (that leads you through a search process step by step), and one can carry out advanced word searches using Boolean operators such as AND and OR.

The media features within the program are varied, creative and quite extensive. As well as videos, animations, illustrations and sound clips one can access:

• Virtual tours - interactive tours (interlinked images with captions) of 59 different locations or items such as Cape Town and Hinduism;

• InterActivities - 81 multimedia learning activities on topics such as DNA Structure, Orbit and World Music (they include photos, animations and sound clips);

• Collages - blendings of photos, audio and video on topics such as War on Disease and Ancient Egypt;

• Media Gallery - an index of the various media items;

• Timeline - a pictorial chronology of events with icons and headings that you can use to jump to related articles or media items;

• Places - hot links to articles about regions, countries or cities.

• Mindmaze - a multimedia quiz game with 4 levels of difficulty.

The Online features continue to be one of the main strengths of Encarta, and one can now access over 8,500 World Wide Web links. If you have a modem and an Internet access account you can:

• Download monthly updates and new web links via an automated process that is fairly easy to use;
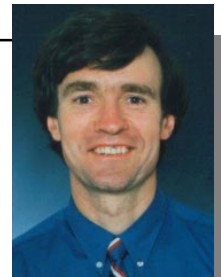
• Jump directly to the Encarta website at http://encarta.msn.com/eng (it provides information about the encyclopedia, monthly updates, other Microsoft products and product support);

• Get some tips about using the World Wide Web;

• Access the Web links.

As mentioned above, it is now possible to jump from within an article to a related web link, via the More Information button. There is also a directory of all 8500 web links - an alphabetical listing across all subject areas (although you can display just the web links for a particular subject category). For each link there is a one or two sentence summary - you can copy the URL or jump directly to the site.

It is possible to print or copy articles, text or images. There is detailed online help and an outline 31-page user guide.

Encarta 99 World Atlas is the latest edition of the popular multimedia atlas from Microsoft. The interface is similar to that used in the encyclopedia, and it is attractive and easy to use. The program is one of the most detailed multimedia atlases available, with information on over 1.2 million places; a variety of maps and views that include a satellite view of the world at night, standard political and geographical global maps, a map of the moon, and detailed street maps; articles on the geography and culture of every country in the world; over 3,500 color images, music and sound clips; and links to a wide variety of relevant sites on the World Wide Web.

From the home page one has the following choices:

• Find - search for particular locations;

• Navigate - browse global views of the world;

• Discover - see below.

• Discover leads to a variety of multimedia features and education resources. They are as follows:

√ Virtual Flights;

√ Map Gallery;

√ "Name That Place" game;

√ World Compare;

√ Global Themes;

√ World Tours;

√ Statistics Centre.

Virtual Flights consist of unique 3-D flights across landscapes such as the Grand Canyon, the British Isles and New Zealand. You are provided with an overhead view of the countryside, with labels for cities and landmarks, and you can control the speed, camera angle and direction of the flight.

Map Gallery provides access to a variety of views of the globe. These can be rotated in any direction, or one can choose to zoom in through successive levels down (in some cases) to city map level. There are a wide variety of views available, including world by day, world by night, temperature, physical, precipitation, statistical, population, time zones, and the moon.

All map views allow varying degree of zoom, and one can display a legend that explains what the various symbols and colored regions represent. In the Comprehensive (default) level all major cities, rivers and natural features are displayed, and by clicking on one of them one can jump to articles about that city or country or (where they exist) related web sites.

There are background articles available on every country. These provide a useful summary of statistical data (current to about 1995 or later - though one can obtain updates from the Internet) and topics such as land and climate and

society. Most include pictures (e.g. of the local wild life) and sound clips, and they would be a useful resource for upper primary or lower secondary school projects.

The Find feature allows users to search for information in categories such as Places, Countries, subject content, videos and statistics. It is quite powerful and easy to use.

Name That Place tests your knowledge of the location of cities and countries of the world - a map is displayed with a city or country highlighted, and you have to choose the correct one from 5 possibilities. It has 4 levels of difficulty.

World Compare allows you to compare articles about different countries or aspects of countries.

Global Themes provides a collection of articles under the headings of Mapping the World, The Physical World, The Living World, the World of People and Environmental Challenges. They provide a good, general introduction to topics such as Earthquakes, Domesticating Animals and Deforestation, and they include photos and short video clips.

World Tours provides multimedia tours of a variety of topics such as Capital Cities of the World and Nature in Danger.

Statistics Centre provides a range of statistics in categories such as Agriculture, Infant Mortality and Population- most of them current to 1995 (or later in some cases). You can display the data as tables or graphs and carry out a range of comparisons.I was interested to note that Australia now has the world's 3rd highest life expectancy (80) - after Andorra and San Marino.

One of the program's strong points is its links to relevant sites on the Internet. One can now jump from within an article directly to any relevant sites on the Internet,(a copy of version 4.01 of Explorer is supplied on disk). So for example, from the map of Austria I had a choice of 7 websites about Austria, as well as a special Encarta online article with updated information about that country. This is an excellent resource for any prospective traveler.

There is no user's guide, but the online help provides an interactive guide to all features within the program, as well as suggestions as to how one can get started in the program.

Bookshelf 99 consists of the following 6 reference titles:
- Chambers Dictionary;
- Bloomsbury Treasury of Quotations; Penguin Roget's Thesaurus;
- Concise Encarta Encyclopedia;
- Harrap Concise French/English/French Dictionary;
- Harrap Concise German/English/German Dictionary.

The program uses a Pinpointer-style interface for accessing the various reference works - a process that works well and is easy to use.

There are also links to thousands of relevant sites on the Internet.Quickshelf allows you to access Bookshelf features such as definitions or synonyms while working in other applications, or even on the Internet. It is also possible to copy the contents of Chambers Dictionary and Rogets Thesaurus to your hard disk, so that you don't have to insert the CD-ROM when you want to access these features.

There is no user guide, but there is detailed online help, as well as an introductory tour.

Australian Distributor: Microsoft
(Tel: 61 2 9870 2362)
(Fax: 61 2 9805 1108)
(http://www.microsoft.com.au)
Format: 6 CDs for Windows 95/98 and NT
Publisher: Microsoft
(http://www.microsoft.com)

SMALL SOLDIERS: SQUAD COMMANDER

Small Soldiers: Squad Commander is a strategy game based on Small Soldiers, the recent movie. It features great 3D animation, voices, sound effects and video clips from the movie, and 20 separate missions. It is suitable for 8 years and up, but there are 3 levels of difficulty, and the 14 year-old evaluator is finding the hardest level suitably challenging. In fact he loves the game so much that it has been difficult for me to get near it.

For those who haven't seen the film, the setting is a quiet, suburban community that has just become party to "a pack of pillaging playthings". Two new lines of toys - the Commando Elite and the Gorgonites have just hit the shelves -with names like Chip Hazard, Brick Bazooka and Butch Meathook they are suitably macho, and the little darlings will just love 'em. Unfortunately a new, super smart microchip has accidentally been installed in each action figure, with the result that they come to life and go to war against each other - the object being to take control of the neighborhood.

You can take on the leadership of either the Commandos or the Gorgonites, and once you have decided which, the game is played in groupings of missions called campaigns. Each mission is at a particular location and has one or more objectives. For example, the Commando Mission at the Peterson Residence requires you to "find and rescue Butch" and "assemble the pump to flood the Gorgonite occupied basement".

Game play is in overhead view, with a main map and mini map (reduced view of the whole 'battlefield'). The characters, objects and items are colorful and easily recognisable, and essentially you group, move, re-group and fight your way around the various rooms of the house. Rooms or areas that you haven't visited stay dark until you enter them, and the action is fast and furious. The sound effects are excellent, and the characters say the same sorts of things as they do in the movie (same voices) e.g. "MMMhmmmm!", "Let's roll", "locked and loaded", "Yesss????!!!" and "You name it, I'll shoot it." For each mission you select suitable soldiers for your squad (each one has his own particular weapons), and then set out. As well as blasting any baddies that you see, you have to avoid traps such as flaming pits and buzz saws and collect various objects. The latter are in fact quite varied, and include 'throwable explosives', items that increase your 'health level' and special upgrade items that give you special skills such as increased sight radius (binoculars). There is also a variety of quite

challenging puzzles that have to be solved along the way. For those that are into "shoot-em-ups", this game is colorful, fairly easy to play and loads of fun.

You can save your games as you are going along - do this frequently, so that if one of the squad members gets chopped up by a buzz saw you can backtrack to where you were before you encountered the hazard. There is online help available at any time, as well as some shortcuts and tips on general game play. There is also a 31-page user guide that provides a good explanation of all program features.

Australian Distributor: D a t a f l o w
(Tel: 02 9417 9700)
(Fax: 61 2 9417 9797)
(www.dataflow.com.au)
Format: One CD-ROM for Windows 95
Publisher: Hasbro Interactive
(www.hasbro-interactive.com)

MULAN

Mulan: Animated Storybook is an interactive book based on the Disney movie of the same name. As well as an outline version of the original story about a girl who takes on the role of a great warrior in ancient China, it features a variety of games and activities, sing-alongs with 3 songs from the movie, and a 'create your own story' feature. It features good quality cartoon graphics, voices and music from the original movie, and it is suitable for ages 5-9.

The story is presented in an unusual, interactive manner. Mushu the comic dragon (whose voice sounds suspiciously like that of Eddie Murphy), has dropped 5 magical story scrolls throughout the story screens, losing some of the magic in each one. In each location you must first find the missing scroll, read it, then carry out a variety of tasks to restore the magic and thereby be able to read the rest of the scroll. This amounts to two or three paragraphs of text per scroll. At each location there are also games to be played and objects that you can click on to make things happen. Mushu flies around offering helpful hints, and so at each screen you alternate between reading the scroll, completing some sort of activity and doing what Mushu suggests.

To illustrate by example, at The Imperial City (towards the end of the story), the basic object is to rescue the emperor and drive of the Huns. The process is as follows:
- Read the first page of the scroll;
- Click on Mulan and she will tell you to drive off the guards by throwing watermelons at them;
- Click on the melons then the guards to achieve this;
- The scroll starts flashing, so read another page of it;
- Click on the Emperor so that he can escape into the crowd;
- Click on Mulan repeatedly to enable her to fight with the remaining Hun;
- Listen to Mushu's pleas for help and then click on a door to release him;
- With the help of a large firework he drives off the Hun, and you can then proceed to the Imperial Storyteller to receive your reward.

It is all quite entertaining, and children of the recommended age group (especially those that have seen the movie) will greatly enjoy it. Mushu is there to offer helpful advice whenever you get stuck, and the text is clear and easy to read. On at least one page of each scroll there is a highlighted word - click on this to obtain synonyms for that word e.g. "fight", "war" for "battle".

As well as the activities that you have to carry out as part of the story , there are the following supplementary activities:
- Sing-alongs - sing along Karaoke style with three songs from the movie - "Reflection", "Honor For us All", "I'll Make a Man of You";
- Storymaker - create your own stories, complete with background, text, painting and stickers;
- Dress up Mulan and Mushu - design and print colorful costumes to dress up the two paper dolls that are provided in the package.

There is no online help, but there is a 20-page user guide that provides a good explanation of all program activities.

Australian Distributor: D a t a f l o w
(Tel: 02 9417 9700)
(Fax: 61 2 9417 9797)
(www.dataflow.com.au)
Format: One CD-ROM for Windows 95 and Macintosh
Publisher: Disney Interactive
(http://www.disney.com)

Nick Thomson is the manager of InfoRom, a service on the Internet that reviews educational, home reference and entertainment CD-ROM software. It can be found at www.inforom.com.au. Page 9

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MICROSOFT
WINDOWS 98 (& 95) MAINTENANCE

…by Chess Krawczyk

This article describes 2 major WIN 98 problems, housekeeping and programs that automatically run at boot time.

MAINTENANCE

Windows 98 (and most of this applies to WINDOWS 95) requires regular clean-up and maintenance else things will definitely go wrong. Corruption will spread, programs will crash, machine will hang, etc. The following prophylactic steps will keep your machine healthy, happy and satisfying to you.

Step 1. VIRUS CHECK
If you have a virus checking program resident go onto the next step. If not get one from Shareware, freeware or from the CD on the cover of most magazines. Run it at least once a month. I don't dowload much software so prefer not to have one running all the time and slowing down the machine. McAffee checks every 5 seconds!!!

Step 2. DELETE FILES
Use WINDOWS EXPLORER
        TOOLS
            FIND Files or Folders
To search for *.TMP and *.BAK files, select them (CTRL mouse) and delete (DEL or right mouse) them (send to recycle bin!)

Step 3. UNWANTED PROGRAMS
Check MYCOMPUTER or START
            SETTINGS
    CONTROL PANEL
        ADD/REMOVE PROGRAMS
You may have installed programs that you are no longer using or earlier versions; uninstall them properly here.

Step 4. DEVICE DRIVERS
Everytime you power up Plug and Play WINDOWS checks attachments and may add drivers.
        CONTROL PANEL
            SYSTEM
                DEVICE MANAGER

Check that there are no problems that are shown by a little exclamation mark. Also make sure that you do not have duplicate drivers for modem or printer! I found that WIN 98 installed my 3COM modem as a standard modem and 2 copies of US ROBOTICS Sportster. **Remove** duplicates or take further action to correct.

Step 5. MAINTENANCE WIZARD or SCHEDULED TASKS
Use either in WIN 98 to do the following 4 tasks automatically (Steps 6 -9),
 as if there was a batch file. Or do the tasks whenever you feel like it. The order of tasks is important!

Step 6. DISK CLEANUP
This is great new program that batches the following cleanup:
a.   Temporary Internet files;
b.   Downloaded program files like JAVA applets;
c.   Empties the RECYCLE BIN;
d.   Deletes temporary files particularly the installation files by Microsoft and others.

Step 7. COMPRESSION AGENT
If you use DOUBLESPACE or DRIVESPACE on FAT16 drives this will free up megabytes of data on your hard disk. NB Do this after deleting above files.

STEP 8. RECYCLE BIN
Empty Recycled bin on **every** drive   do this regularly and note that there is a bin on every logical drive.

Step 9. DEFRAG
WINDOWS 98 now has settings to move most often used files into an optimum position on the physical hard disk surface for faster access. The first time you run this it takes a Verrrrryyyy long time since it has to move every bit. Following occasions take less time.

Step 10. SCANDISK
You should run this frequently, but particularly after COMPRESSION AGENT and DEFRAG.

Step 11. REGEDIT
It is useful to browse the contents, I found that even though I had uninstalled McAffee there were still entries here.

Step 12. REGCLEAN
Most of the hangs and problems in WIN 95/98 come from the REGISTRY. This program checks, fixes and backs up the REGISTRY.

Step 13. REGISTRY CHECK
I am not sure what this does above REGCLEAN but why not use it anyway?

Step 14. SYSTEM FILE CHECKER
This program compares version numbers, dates and sizes of DLLs and *MAY* be of great value. For information it is useful.

For diagnostic and fixing it creates problems because of internal inconsistencies. The highest version number or most recent date of a file may not be the best because of newly introduced problems. I have found DLLs with the same version number or date of different sizes. My recommendation is to ignore date variations and go for highest version number.

Step 15 HWDIAG.EXE
This program appeared undocumented in WIN 95 and is the ultimate partner to the REGISTRY. It goes through all hardware known to WINDOWS in your particular machine and warns and highlights serious and fatal problems. If you suspect that there is a configuration problem with your machine this is magic. If you are buying or getting a new machine this program will frighten the dealer into being honest!!!

Step 16. STARTUP Diskette
Update your STARTUP Diskette, by CONTROL PANEL
        ADD/REMOVE PROGRAMS
            STARTUP DISK
 add CONFIG.DOS and AUTOEXEC.DOS and drivers for CD ROM and SCSI if necessary

Step 17. ERROR RECOVERY UTILITY [ERU] Diskette

Another undocumented WIN 95 program Update your ERU.EXE diskette which automatically fixes most problems if you need a STARTUP DISK above. It has a self booting Error Recovery Disk program that runs.

Step 18. BACKUP

You now have a clean system - if you have a tape drive, ZIP drive back it all up. If not and you have 2 hard disks copy the WINDOWS directory, SYSTEM.DAT and USER.DAT onto another physical hard disk. Note WIN 98 BACKUP (from Seagate) can backup onto another hard disk or even another connected computer. At least copy all your personal data files onto floppies since you can eventually rebuild any operating system and application program but cannot recreate data.

STARTUP PROGRAMS

I want to acknowledge and thank Owen Cook for this info found in *www.pcug.org.au/candc/cancfaq.htm*
If you are running WIN 95/98 and have installed other programes, you may have aq number of other programs running at startup. You can see what is loadedand running by the small icons on the bottom right hand corner of the status bar or by pressing CTRL ALT DEL **ONCE** and selecting the program and END TASK. .
A better way is to run
SYSTEM INFORMATION icon in SYSTEM TOOLS
           SOFTWARE ENVIRONMENT
                STARTUP PROGRAMS
 This will not only tell you what is loaded but also where it is "loaded from".
If you want to remove such programs from all future sessions there are now a myriad ways that they may have been loaded.

1. CONFIG.SYS, AUTOEXEC.BAT,. -

 If you upgraded from WIN 3.x then these are likely to still exist. They are totally unnecessary. Try renaming them to Config.old, autoexec.old and then restarting the system - if you see no change, in a few months time **delete** them.

2. CONFIG.DOS, AUTOEXEC.DOS

These files are needed to give you the MS DOS window and support the CD ROM and other drivers, manage MS DOS memory. Use NOTEPAD or WORDPAD to insert REM at the start of any suspect lines - if this causes no problems, then **delete** them later.

3. WIN.INI

Again like WIN 3.x there may be an entry in your WIN.INI file.
Open WINDOWS EXPLORER
C:\WINDOWS
WIN.INI
Check load   =   run   =

4. STARTUP.

You can add and remove rograms by checking WINDOWS
START   on bottom left status bar-
           PROGRAMS
                STARTUP
Is there a shortcut in there that looks like the culprit? Delete it!

5. REGISTRY

There are three Registry locations that may include references to these programs. Run REGEDIT :
HKEY_LOCAL_MACHINE\SOFTWARE\ MICROSOFT\WINDOWS\CURRENT VERSION\RUN
HKEY_USERS\.DEFAULT\SOFTWARE\ MICROSOFT\WINDOWS\CURRENT VERSION\RUN
and (if user profiles are enabled):
HKEY_CURRENT_USER\SOFTWARE\ MICROSOFT\WINDOWS\CURRENT VERSION\RUN
Note: If you plan to delete references from the above locations, make sure to back up the Registry files — **USER.DAT** and **SYSTEM.DAT** — first, in case you make a mistake. The easiest way is to zip them and store them on a floppy disk.

WINDOWS 98 GENERAL

. The solution to WIN 95 problems is to upgrade to WIN 98!
Enough time and has passed and there are enough users to dispel the FUD - Fear, Uncertainty and Doubt - that WINDOWS 98 is a better and more stable operating system than WIN 95 ever was. The existence of rumours: that there are problems with WIN 98 come from those unable and unwilling to upgrade - not from the practical experience of those using it. If you are looking for the base functionality of a 32 bit operating system, a browser, mail and newsreader then I strongly recommend that you start with WIN 98, Internet Explorer 4 (or 5 BETA) and OUTLOOK 98. These programs were developed by the archfiend - Microsoft - but they were developed by ONE company, designed and tested to work together; in all versions and according to the sub judice court case designed to be bundled as one lump. The browser and mail programs are still bundled or free.
This combination is basic, integrated and psychologically related - you do not have to worry about compatibility and setting up, the interface and commands are close to being identical and support comes from one supplier. If you need more features, prefer to support the underdog, have years of experience with another product then you have good reason not to go this way - but - be prepared for hangs, crashes, problems, time to resolve issues and less support.

Chess the Consulting Philosophe
ckrawczy@pcug.org.au
02 62471218
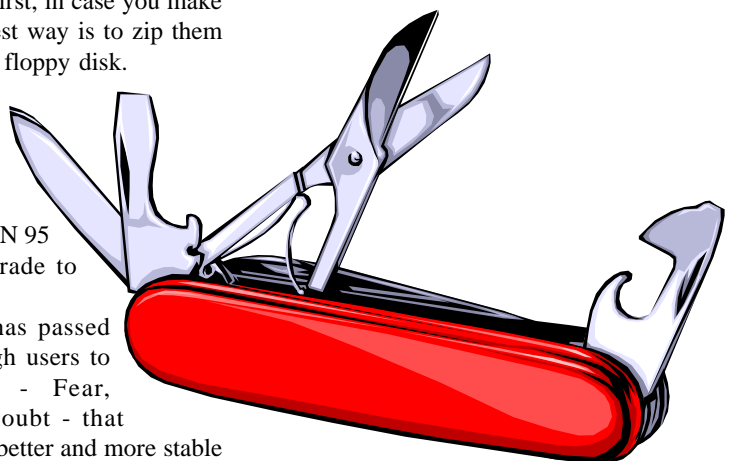
Bits & Bytes

…compiled by Andrew Clayton

Customer: "I have a 464 with 8K."
Customer: "I have a 386 Pentium."
Customer: "My brother has a 486 with a Pentium chip in it."

Tech Support: "How fast is your modem?"
Customer: "I don't know, it's got a Pentium chip in it."

Tech Support: "What operating system are you running?"
Customer: "Pentium."

Customer: "I'm in 386 enchanted mode."

A user called and demanded that his Windows 3.11 environment be changed from "386 Enhanced" to "Pentium Enhanced" since he felt he was "not getting the full potential" of his Pentium.

Customer: "The printer has been acting up. Could that be the cause of our backups failing?"

Customer: "What do you mean, other tape? When it said second volume, I just hit enter again."

Pinched from http://www.geocities.com/SiliconValley/Foothills/8444/calllog2.html

After getting the customer's information, they were asked what the problem was to which they responded, "Well I just got your software, what do I do with it?"

A customer was asked to type in A: at the run line in Windows 95. To this, the customer replied, "How do you spell that?"

Another customer was asked to type in A:\. The customer then began typing in ACOLONBACKSLASH.

Other Web Stuff

Some amusing resume gaffes

http://www.rhic.com/jobsRHIC/jobzone/resumania/resarchivef.html

Confessions of a Burger King ex-employee (you can spend hours here!)

http://www.geocities.com/CapitolHill/Lobby/2645/index.html

See the world as Americans see it!

http://www.nypostonline.com/

Take a peek inside a mad Canadian's wallet

http://www.inforamp.net/~xeno/wallet/main-page.html

Erudite Elitism or Obfuscated Bigotry?

http://www.memepool.com/

Dennis Ritchie, inventor of C, Unix guru, useful links

http://cm.bell-labs.com/cm/cs/who/dmr/

Linguistic Analysis "hours of fun"

http://fonsg3.let.uva.nl/praat/praat.html

Introducing The Remote-Finder, Just Clap! Just Follow the Sound of the Beeping to Find your (lost) remote control unit. Match-box sized device instantly attaches to any remote control unit. The perfect gift for your favorite couch potato. (http://Fox.NSTN.Ca/~gfong/)

☺

By Gabe Martin
borderln@cts.com

The BORDERLINE

© 1995 GABE MARTIN

http://www.cts.com/~borderln/

WARNING!! READING GOVERNMENT WARNING SIGNS CAN BE HAZARDOUS TO YOUR EYESIGHT!

CAUTION
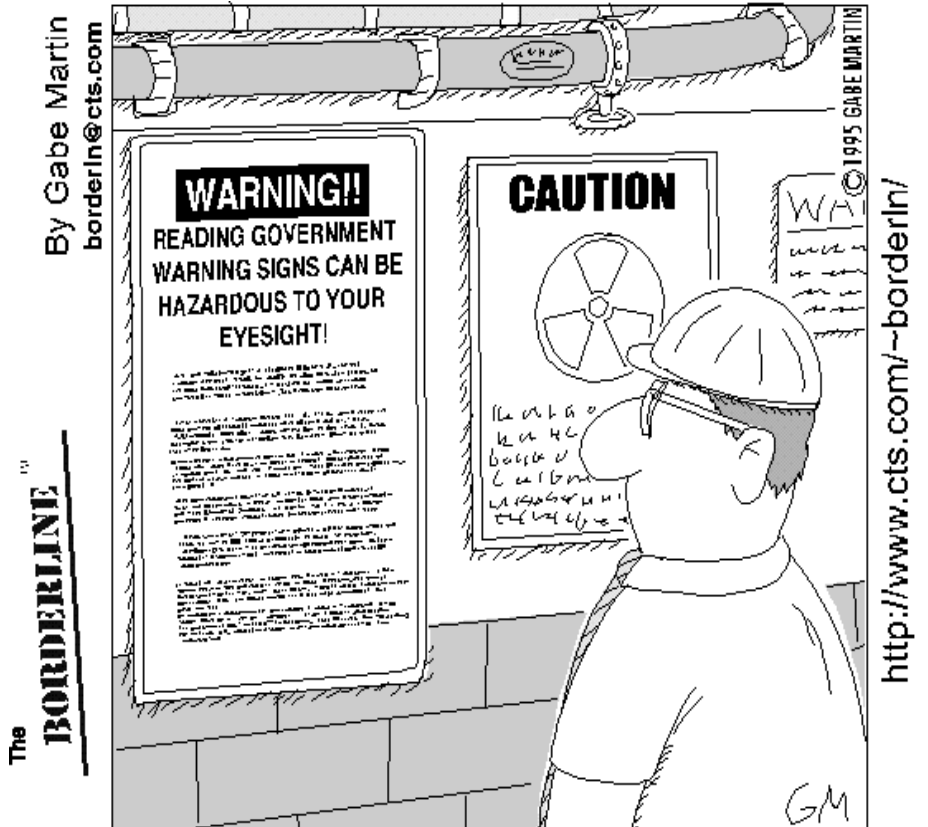
Puzzle Corner
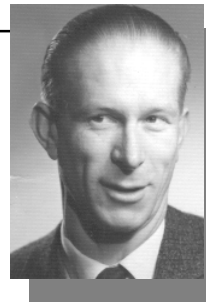
…compiled by Victor Bushell

With this month's puzzle (just the one) we bid a fond farewell to our Russian friends with their Cyrillic conundrums and Glagolitic gotchas (at least until next time).

Sixteen students were returning to Omsk after their holidays. It so happened that four students, A, B, C and D were natives of Kiev; four, E, F, G and H of Moscow; four, I, J, K and L of Saratov and four, M, N, O and P of Fergana. It also happened that A, E, I and M were 20 years old; B, F, J and N were 21; C, G, K and O were 22 and D, H, L and P were 23.

Among them were four mathematicians, four chemists, four geologists and four biologists, and any four students of one subject hailed from different towns and were of different ages.

Four students attended 1st year classes; four were 2nd year students, four were 3rd and four were 4th year students and any four attending classes of the same year came from different towns, were of different ages and studied different subjects.

Finally, four were footballers, four were volleyballers, four were boxers and four were chess players, and followers of any one of the sports came from different towns, were of different ages, studied different subjects and attended classes of a different year.

Establish the subject, the year of study and the favorite sport of each student, if it known that, I is a volleyballer, F is a footballer, C is a biologist, D is a mathematician in his 1st year of study and a chess player, G is a chemist in his 2nd year of study and a chess player and J is a geologist in his 3rd year of study and a chess player.

Congratulations to Phil McFadden, Paul Free, Martin D'Souza and Rob Richardson for their solutions to the October puzzles.

1. Petrov is serious and Sidorov is a joker

2. Komkov is Kostya

3. Yes, black.

4. Correct order: Seryozha, Nadya, Kolya, Vanya, Tolya

5. By 25% (increase) by 16.6% (decrease)

6. By 50% (increase) by 40% (decrease)

7. Husbands spent: 529 roubles (Yuri), 81 roubles (Alexander), 49 roubles (Login) and their wives spent 484 roubles (Tatyana), 36 roubles (Nina), and 4 roubles (Olga).

Questions 5 and 6 seem to have been the trickiest and most confusing, caused, no doubt, by my wording. I must thank Rob Richardson for pointing out that my terminology was incorrect and the wording of the puzzles ambiguous. The purchasing power is independent of prices since it is a measure of disposable income. Hence the purchasing power (ie how much money is available to spend) does not change regardless of movement in prices. It is how much that can be bought with the purchasing power that is the problem – not the purchasing power itself – and that is how the puzzles should have been worded. With that understanding of the terminology, here is one way of tackling these types of problems.

5. Suppose, for example, 1 kg of potatoes costs 1 rouble, then after a price reduction of 20%, the 1 kg will cost 0.8 roubles, and 1 rouble now buys $1.0/0.8 = 1.25$ kg of potatoes. Similar reasoning applies to the case of an increase in the price of all goods.

6. Suppose, for example, 100 roubles buy 1 kg of potatoes before the changes. Then 100 roubles could buy 1.2 kg of potatoes after the first increase of 20% (ie decrease in the cost of potatoes) and $1.2 \times 1.25 = 1.5$ kg of potatoes after the second increase of 25%. That is, the amount of potatoes that can be bought after the two increases is 50%. Similar reasoning applies to the decreasing case.

Finally, I would like to share with our readers a most unexpected and delightful response from some young children. Their message refers to the November puzzles and reads as follows:

"We are year 3 / 4 students at Mt Rogers Community school. We are 8, 9 or 10 years old. We do extension Maths.

We completed your puzzle yesterday. It took us three days. We wrote all the clues on strips and pinned them to a pin board. We used a grid to organise the information and tried to work it out every morning. Mrs King put us to work on Puzzle Corner but she didn't give us the answer. Every time we thought we got something right we would tell Mrs King secretly. We got all the clues right and found that the Norwegian … (*correct answer*)

We got permission from our parents to put our names in *Sixteen Bits* if we are right."

A follow up message from their teacher, Bronwyn King, goes on to say …

"The kids are enjoying the puzzles. They worked on the clock puzzle today and came up with (*the correct answer*). We'll try number 3 next week. The puzzles have made the kids so keen that they answered a puzzle in *The Canberra Times* yesterday and are mentioned in today's (Friday) paper. It's a great way for the students to get an interest in the fun side of maths (they hardly see it as work!)"

Aimee Malone, Brett Austin, Caleb Richards, Casey Bourke, Loki Koviacic, Manoo Sutherland, Robyn Shaw, Sara Dubravs, Sarah Freudenberger – take a bow!

Send your solutions (not in cyrillic script, please) to Vic at *vicbus@pcug.org.au*

Software Library
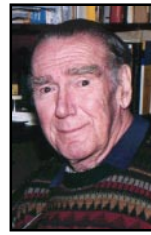
Phil Trudinger

NEW AND UPDATED WINDOWS FILES

(Files marked with an asterisk require Windows 95)

BUSINESS/HOME OFFICE

BTFULL* (6807033 bytes)
Plexis BT32 is a powerful order entry and point-of-sale package for Win95/NT. Reg Fee $89.95

CHAOS32X* (2848103 bytes)
Time & Chaos 5.3.4 is a powerful PIM for Win95. Features include an extensible architecture, tight integration with Exchange and Word, TAPI compliance, powerful search and reporting capabilities, multi-user support, drag and drop support, and more. Reg Fee $45

DM9521* (986764 bytes)
Delegator Multi-User 2.1a is a performance and project management system for large and small organisations. This allows you to track assignments, plan workloads, manage projects, review long term performance,

The files described in this article are on the October 1998 CD-ROM (PsL Vol 6, #10) which is currently on the Bulletin Board: all are ZIP files.

The text files, CD1 through 7, in Area 1 of the Bulletin Board, are the monthly CD-ROM file lists.

Reminder

Most CD-ROM programs are Shareware. A reasonable time (generally one month) is allowed for evaluation, but if you continue to use a program beyond this time you should comply with the author's conditions that usually require payment of a registration fee. Bear in mind that this is the only way by which an author receives any reward for his/her efforts. Unless otherwise stated registration fees are in US dollars.
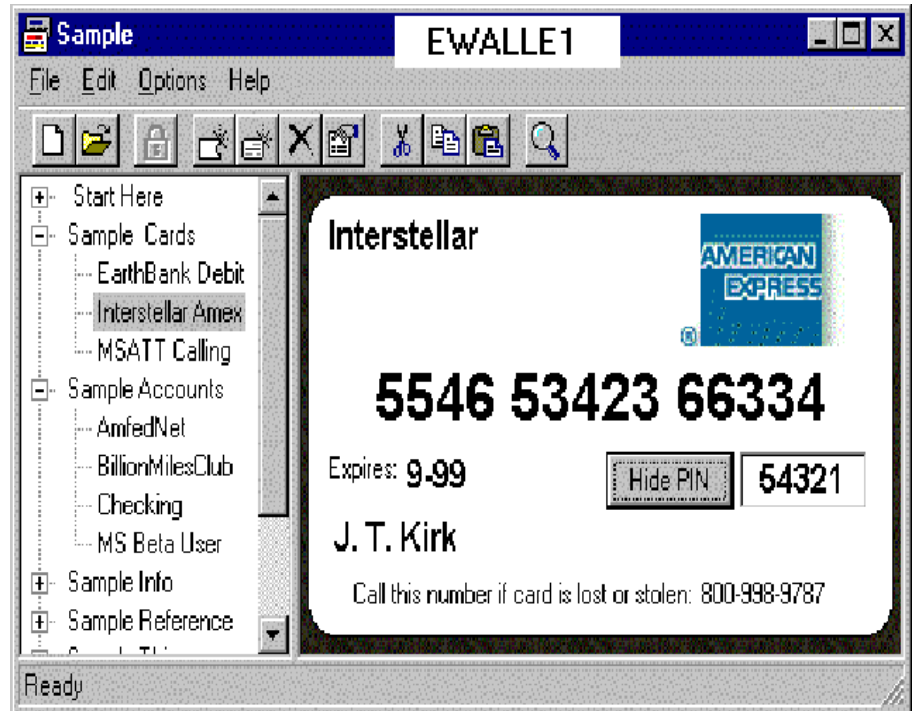
communicate priorities, bring forward items, manage contacts, and more. It can be adjusted to fit your organisational style and preferences. Reg Fee $180+

EWALLE1 (782370 bytes)
eWallet is an electronic wallet for your most important personal information such as to store your credit cards, calling cards, bank account numbers, passwords, PIN numbers and more. You can create as many different wallets as you need, containing as many categories as you want. Reg Fee $?

IPRO301 (1968682 bytes)
InfoDex Pro 3.01 is a dynamic, powerful flat-file database that allows you to manage business contacts, computer software, equipment, passwords, etc. Supports 9 field types: String, Number, Currency, Date, Time, Combination Date/Time, Check Box, Memo, and Picture Fields. Features include: Import, Export, Quick Search, Locate, Full-Text Search, Browse, Sort, Print, Print Preview, Custom Report Designer, Avery Label

Printing, View Ranges, Record Tagging, Password Protection and much more. Reg Fee $60

PHONEB95* (4909545 bytes)
PhoneB95 4.06 is a unique phone/address book for Win95/NT. In addition to the usual information you can also enter birthdate and scanned photographs. Reg Fee $15

FINANCE

BALANC1 (767978 bytes)
BalanceIt! Mutual Funds 1.2 allows you to manage your portfolio which typically consists of several mutual funds that you will want to analyse. It will keep a record of each of these funds including the fund name, its return on investment, a minimum investment you specify, and its stock, bond, and cash reserves distribution, and more. Reg Fee $29

CALC2 (3787219 bytes)
Mortgage Calculator calculates your monthly mortgage payment based upon the loan amount (principal), the number of years of the loan (term), and the interest rate for the loan.

Dual language capable, in both Chinese and English. Reg Fee $10

CSHWZD11 (91147 bytes)

CashWizard POS for Windows 1.1 turns your computer into a cash register. This is fast, easy-to-use, and flexible, with minimal hardware requirements. Reg Fee $77

FXAST13 (1806046 bytes)

FixedAssetsRegst 1.3 calculates depreciation, tax allowances, assets disposals, and assets improvements. Sample data is included. Reg Fee $75

LOANAC (1505120 bytes)

Loan Amortization Calculator calculates a loan payment amount, principal amount, or the term of a loan. An amortisation schedule is also produced and displayed. Reg Fee $0

GAMES

32SB11 (1121199 bytes)

3D Spinball is a great action-arcade game that requires you to think fast and move fast to survive. Your objective: Destroy all the blocks in the center of the screen, by causing the Spinball to collide with them. Reg Fee $15

500_95* (1985823 bytes)

Five Hundred for Windows 95 3.1 allows you to play the popular card game of 500 in Win95/NT. Reg Fee $29

5PLAY102 (503437 bytes)

Five Play 1.02 provides an 11x11 grid of squares, where the computer puts coloured disks on each turn, and you move one disk to another square, trying to align disks of the same colour. When you get 5 or more in a row, a '5-play', those disks are removed from the board and you get points scored for each disk removed. Reg Fee $19.95

CLK (312649 bytes)

Clickomania! 2.0 is a game where you can click on groups of stones with the same colour but not on isolated stones. When you click on a group, the group vanishes and the stones on top of them fall down. The game's goal is to get rid of all the stones. Reg Fee $0

COLONY (1410533 bytes)

TZ-Colony for Windows 1.01 is an interesting game where the aim is to become the richest creature on the planet. You accomplish this by reaching the highest value of goods, land and money as it is displayed before every round in the wealth overview. You can either cooperate with the other colonists to increase

the overall value of the colony or you slow down its development by withholding desperately needed goods. Reg Fee $25

DS1 (154757 bytes)

Drain Storm 1.02 is a very polished, highly addictive, tactical challenge. Venture deep into the sewer, pursued by bizarre, deadly monsters. Gather weapons: radio-controlled explosives, decoys, giant bubbles (which swallow monsters whole) and many more. Visit Poker Casino to wager weapons, and battle pit bosses! When you're powerful enough, attempt the awesome, final challenge-to destroy the monster which lurks beneath! Reg Fee $0

INSTALP1 (2174035 bytes)

Pop! The Balloon Dog Puzzle Game 1.3 guide Pop on his way to the moon past porcupines, thumbtacks, cats, bees, fire-crackers, car batteries and more. This deviously demented puzzle game features 87 levels of cartoon mayhem. Reg Fee $14.95

KCHESW22 (217517 bytes)

K-Chess for Windows 2.2 is an educational Chess program for Windows that shows its own calculations as it works. It features various types of hints and help, and can devise the best line of attack for several moves ahead. One or two players may participate, or you can observe the computer in auto-play mode. Keyboard and mouse input is accepted. Reg Fee $25-$50

MSUN101 (1057245 bytes)

Midnight Sunitaire 1.01 is a classic solitaire game in Norway. Somewhere in the game,

there is a ghost hidden. This little guy is hiding approximately 90 winnable games! Your mission is to find this ghost and thereby access his list of games. Reg Fee $0

SAIL17 (6938614 bytes)

21st Century Sailing 1.7 is designed to be realistic and challenging for even the most experienced sailing enthusiast. You can race against up to three other boats of varying skill levels and choose from three different race courses. You can also control wind parameters and the length of the race-course. Reg Fee $24.95

TZMGOLF3 (2589048 bytes)

TZ-Minigolf III is a fun miniature golf simulation for Windows for up to 4 players with music, sound and 6 nicely designed and very tricky holes. Reg Fee $25

GRAPHICS

AAAPG104* (239244 bytes)

AAApeg 1.04 is a JPEG image browser/slide show utility for Win95. It supports JPG, TGA, PCX, BMP, and non-LZW TIF. Reg Fee $10

ACDC3223* (1442167 bytes)

ACDSee 2.3 is a fast JPEG, GIF, BMP, PCX and TGA graphics viewer for Win95. 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 $35
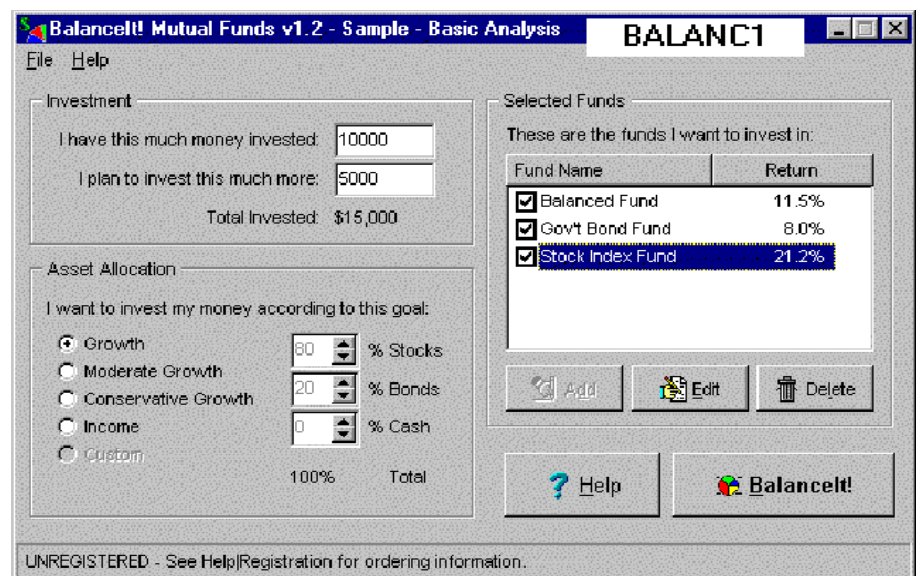
ASG32* (986334 bytes)

A Smaller GIF 1.08 helps compress GIF(1) animations in Win95. Reg Fee $22

AXICON45* (2232194 bytes)

AX-Icons 4.5 is an icon editor and library manager. Features include rectangle/line/circle-drawing tools, the ability to create dithered shades, drag and drop support, clipboard support, and more. Requires Win95/NT. Reg Fee $19

BABYCHRN (4234247 bytes)

The Baby Chronicles gives you a way to make a full multimedia record of your child's formative years. Record their first words and couple them with pictures. Include pictures of family members and friends along with sound files and text to truly capture the events and bring them to life. Document trips with pictures and sounds, keep track of medical history and educational history, birthdays and major events. Capture and record everything from a first giggle to a senior prom. Reg Fee $39

CASC4W (1665777 bytes)

CasCADe for Windows 3.12E is a precision CAD software package that can reduce development time and money on any given project. Left click to draw, double-click to control the result, right click to change. No matter if it is your desktop design, a drawing element, a pencil, a text-style or even a whole part of your drawing, you can save and reload it later when in need, adjust its current or saved characteristics by mouse-click, and throw your quick and dirty ideas on the document and specify them later in detail by simply clicking on the objects. Reg Fee $199

CVIMAG1 (990852 bytes)

CyberView Image 2.01 is the interactive live JPEG image compressor. Its key features are live automatic image compression and preview, side by side presentation of source image, compressed image and simulated 8-bit view of JPEG, smart zoom and image centring system for effortless examination of compression results, plug-in module for graphic applications, highly customisable environment, and much more. Reg Fee $29.95

JMV20 (283194 bytes)

Sorbet is a program which creates thumbnail icons for BMP, JPEG, PCX, GIF, PNG, TIFF files. Sorbet shows you its thumbnail anywhere you see an image's icon. There's no easier or faster way to manage graphics files. Reg Fee $24.95

PASSIST (273008 bytes)

PaintAssist allows you to easily get frames from AVI movies, convert vector graphic (desktop publishing) clipart images into bitmaps, add great text effects, and transparently paste any image. Reg Fee $20

INTERNET

AM32S10B* (855498 bytes)

All-Mail (32-bit) 1.0b checks for the arrival of new email in a single or multiple accounts and retrieves any new email to your machine. The software dials up your ISP at pre-set intervals, sends any outgoing mail, retrieves new mail and then disconnects. The sending of outgoing mail is configurable. Reg Fee $19.99

AW3212* (3170970 bytes)

Alchemica Webworks for Win 95 1.2b is a project-based integrated development environment for building and publishing web sites. You can create a single project which you can simultaneously publish to a World Wide Web server, an intranet server, a CD-ROM or an HTML help application. Mirroring and spanning features allow you to upload a web site to several different servers, or to spread a web site across different servers to avoid extra bandwidth charges. Alchemica Webworks provides several different ways to view your project, and offers single-click editing and viewing of any source file in your project, and much more. Reg Fee $29.95

AXMGR (111573 bytes)

ActiveX Manager enables users and developers to manage ActiveX Controls installed on their PC the easy way. It is great for users who surf the Web and want to keep their system clean (ActiveX Manager helps you clean controls installed by Internet Explorer). ActiveX Manager provides a simple yet slick user interface that enables you to view registered controls, remove misbehaving controls, register new controls and more. Reg Fee $19.95

BANDZ (521861 bytes)

Browse and Zip 1.11a is a Plugin for Netscape and Internet Explorer (versions 3 and 4) which allows you to view the contents of ZIP files without having to download the entire file, download individual files to view without having to download the entire ZIP file, restart aborted downloads completely within your browser, and download and install programs from ZIP files automatically. Reg Fee $20-25

BIGBRO (101567 bytes)

Big Brother is a program that will inform you of what's happening with your ISP sites all over the world. The program, and not your users, can tell you that your router, unix box or portmaster is down in any location, and can tell you what happened at any point specified. Reg Fee $0

BLACKWDO.ZIP 1236968 bytes)

BlackWidow 3.61p will completely reconstruct a web site in an FTP-like window. The site's profile is presented in a Windows Explorer format showing file sizes and last modi-

fied dates. It can be used to download all files (or selectively across folders) from a web site. You may save the site's profile for later use, and/or merge other profiles together. Reg Fee $40

BPFTP1 (711075 bytes)
Bullet Proof FTP 1.07b allows you to continue browsing the Web while downloading files in the background. You can continue to copy files to the clipboard, and they will automatically be queued for downloading and much more. Reg Fee $29.95

CK_IMAP* (727210 bytes)
CheckIMAP Lite for LANs 1.01 is an email notification utility for Win95/98/NT that sits in the system tray and signals the arrival of new email to the user. The software frequently checks an email account for the arrival of new mail items in a mailbox on an IMAP mail server. The user's email client does not even have to be running. When new mail has arrived the software can display a 'new mail' notification dialogue listing the author and subject of all new mail items, play an announcement and continue playing an 'alarm' sound until acknowledged. The notification dialogue also allows the user to immediately launch their email client to read their new email or, alternatively, dismiss the notification dialogue to read the new email later. Reg Fee $149+

CP_SETUP.ZIP 913111 bytes)
Cyber Patrol 4.0 allows you to control Internet access by Time of day total hours per day, total hours per week; control access to Internet Relay Chat (IRC) groups, Internet sites that distribute offending content, Online service providers, Games or other applications; control access with CyberNOT List, CyberYES List, ChatGard word lists, additions and overrides. And, you can define different control settings for each person who uses your computer. Reg Fee $29.95

DIALER1 (511456 bytes)
Dialer 2000 is designed to keep you connected to the Internet, no matter what! You can preset many functions, including checking your email for new messages while online, and more. Reg Fee $10

DPUMP (1349956 bytes)
DISCo Pump saves Web pages on your computer for later viewing. It will follow all references and automatically copy all necessary files. After the 'pumping' you may look through necessary pages comfortably, without an Internet connection, saving both time and money. Reg Fee $15

EPP11 (914846 bytes)
EditPlus 1.0 is an Internet-ready, full-featured text file editor for HTML, C/C++ and Java. Features include syntax highlighting, HTML Toolbar, user tools and help files, auto completion, cliptext library, multiple settings,

the ability to edit large files, powerful undo/redo, word wrap, line number, drag and drop editing, powerful search and replace, spell checker, splitter window, keystroke recording, and more. Reg Fee $20

JIG (2692246 bytes)
JIG 1.1 is a Java integrated development environment that lets you write, manage and debug applets and applications written in Java. The JIG Browser provides a fine level of control and manipulation of Java source code elements and their relationships. The developer gains maximum access in complex domains through the use of source code browsers providing different views of the code, from the system, class and hierarchical level down to internal references and methods. Reg Fee $109

KSCROLL (2935270 bytes)
KatieSoft Scroll 3.0 is a unique Web interface that quadruples your Web surfing power. By providing a multi-paned browsing environment (four windows), it allows you to surf multiple sites at once, explore different areas of one site simultaneously, compare information from multiple sources, and more. Reg Fee $19.95

KWEB20 (1871527 bytes)
Kid's Web 2.0 provides children and parents with a safe environment to browse the web. Giving links to sites of interest to children, and sites which provide reference points, such as dictionary.com, will help children get the best from the Web. Reg Fee $0

NETBK (341585 bytes)
Internet Notebook keeps track of your favourite URL addresses and detailed descriptions. This supports HTTP, FTP, Mailto, Gopher and Telnet. You simply select a name from the notebook tree. press connect, and your primary browser will connect to the site. Reg Fee $25

NN1P42 (1627951 bytes)
Nomad News 1.42 can be configured to access multiple news servers. It allows you to retrieve all the headers the News Server has for a given newsgroup, but also allows limiting the headers retrieved to those posted since the last time you retrieved headers for the newsgroup, or those posted within the last so many days. Reg Fee $19.99

NR95033 (2860710 bytes)
News Rover 3.3 is powerful tool for browsing Usenet newsgroups and managing personal messages. It automatically scans newsgroups,

downloads messages you want, decodes attachments, rebuilds split-message attachments, eliminates duplicate files, and even produces a thumbnail picture gallery of JPG images for your quick review. This version will store only 20 messages or files each time it is run. Reg Fee $30

RNMT (933888 bytes)

Reanimator allows you to reconstruct the text of Russian email messages. It can also help translate Russian text from Roman alphabet to Cyrillic and back. Reg Fee $10

MATHS

CCUNITS2 (428649 bytes)

CCUnits 2.0 converts units of measure common in engineering and science. Also, several physical constants can be consulted. It includes 24 magnitudes and in each magnitude the most frequently used units have been chosen. Unlike other unit conversion programs, CCUnits only provides the most frequently used and important ones. Reg Fee $10.95

EQUATION (928093 bytes)

Equation Editor 2 provides a simple means of cutting and pasting mathematical equations into a word processor. Reg Fee $20

UNITSTAR (50191 bytes)

UnitStar 1.1 converts between over 400 common and uncommon measurement units in 23 categories. It can also create a table of conversions between two units in HTML format. Reg Fee $8

VISUALMT (2353236 bytes)

VisualMath is a graphical programming language for solving math and engineering problems. In its basic design it will solve any matrix math problem. With the appropriate toolbox, it will be capable of solving digital and analog systems. Reg Fee $49-$99

MISCELLANEOUS

BN20 (1080884 bytes)

BibleNotes 2.0 is a freeware program that allows you to create a database of your notations of your Bible study. It allows search functions by date or by reference. The registered version offers more enhancements. Reg Fee $0

DTSEVA51 (3440426 bytes)

dtSearch for Windows 5.1 is a powerful text retrieval program. Ami Pro, WordPerfect WordStar, MS Word, MS Works, Multimate, RTF, and ASCII files are supported. It can perform indexed and unindexed searches, as

well as wildcard, boolean, phrase, proximity, and segment searches. Other features include network support, international language support, application launching, and more. Reg Fee $149

ELW15DSU (394591 bytes)

L/C Wizard 1.5 is a full-featured educational tool for listening & speaking of foreign languages. This is for Window95/98/NT. It records human voice or music from your audio tapes and compact disks into digitally re-mastered files, and provides you with a convenient means to transcribe audio recordings into text. Reg Fee $15

HIERO (1194501 bytes)

Hiero contains an 18 point, Egyptian Hieroglyphics bitmapped soft font for HP LaserJet printers. This is a strictly a symbol font. Reg Fee $0

VB10 (3501510 bytes)

Virtual Binder 1.0 is a replacement for the binders you use to store information every day. It provides the ability to assimilate multiple types of information under a single common user interface. You can store multiple binders in the central database, then subdivide the binders into sections, then enter all your information, and more. Reg Fee $20

VP22* (2400100 bytes)

Verse Pack 2.2 is a pop-up scripture memorisation and review utility for Win95/NT. It allows you to enter the verses you would like to review and store them in ordered files or 'packs.' Pre-built packs are available from the author's website. Reg Fee $25

UTILITIES

ATMTM20 (494122 bytes)

Atom Time98 2.0 is a program that will verify the accuracy of your computer's internal clock with the atomic clock in Boulder, CO. It will either do this automatically at preset intervals or it can be done manually. Reg Fee $10-20

AXCURS (2192106 bytes)

AX-Cursors 4.5 allows you to create, manage and distribute static and animated cursors. You can create fabulous cursors libraries, compile them and distribute them as self-executable files. Features include an IE4 style toolbar, recently used list, favourite list, the ability to export as BMP, and much more. Reg Fee $19

VP22

Verse Pack 2.20 - Sample Pack 1
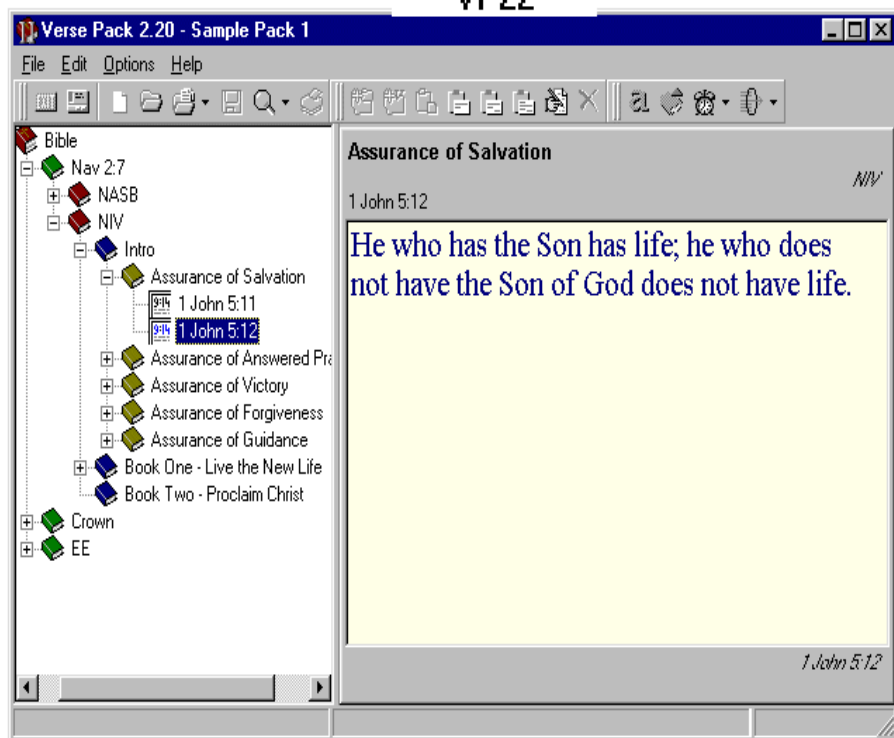
BINMAN1 (1315018 bytes)

CentrivexBinMan is a background application which scans the Recycle Bin looking for files which can be discarded. The application has three modes of operation to specify when the scan is to run, and what criteria are to be used to decide whether to discard a file. Reg Fee $?

CLOCKW1* (2941585 bytes)

ClockWatch Pro for Win95 queries one of the time servers maintained by the National Institute of Standards and Technology which then returns the exact standard time. ClockWatch converts standard time to local time and compares it to the internal system time on the computer, adjusting the system clock if necessary. Settings can be made on demand, on a regularly scheduled basis or automatically based on the specific experience of the local system. Reg Fee $19.95

CLOX2000 (2622170 bytes)

Clox 2000 - World Time Zone Clocks 6.00.4 is a Windows applet which displays a bar of both analogue and digital clocks which show the times in seven user-specified international time zones. A scrolling, clickable world map makes setting-up easy. A new feature is an- other map which shows daylight and darkness around the world, and more. Reg Fee $0-10

DFORTR1 (108053 bytes)

Data Fortress 1.0 allows you to keep private information inaccessible from anyone but yourself. This program protects your confidential files from hackers, snoops and Big brother. Protect any normal file type, important documents, financial data, and it is great for encrypting backups. Reg Fee $19.95

REGVIEW* (480559 bytes)

RegView 2.21 is a registry editing and system restoring package for Win95. Features include the ability to select the root or the whole registry for registry key or value search, the ability to replace and delete with one single search, and a 'record and compare' facility that allows you to track any registry change. Reg Fee $39

RTWEAK3* (2194824 bytes)

Rtweak 2.1 is a utility for power users that allows them to take control of their system by permitting the altering of Windows 95 registry settings to customise your system and optimise certain features, all without using the archaic Regedit program. This functionality is presented in an easy to use format with an intuitive but powerful interface. Reg Fee $10

SAGT20 (5637811 bytes)

Shareware & Graphics Tracker 2.00 allows you to keep track of all those files which you never seem to be able to find when you need them most. These files can be shareware files downloaded from the Internet, graphic, multimedia files, etc stored on any number of removable drives, CDROMs or hard-drives with fast auto-entry which takes out all the hassle out of data entry. Reg Fee $40

TERMINUS (5251563 bytes)

Terminus 2.1.001 overwrites every byte of data in a selected file (or group of files, one file at a time) several times to obscure the file's contents. The the filename itself is scrambled a number of times, then the attribute flags used by Windows to determine system, read-only, are overwritten, file names are scrambled, and then the file is deleted. Reg Fee $29.95

DOS GAMES

32AST10 (2166752 bytes)

Asteroid Impact 1.0 is a game where your mission is to protect mother earth from destruction, where wave after wave of high velocity asteroids hurtle towards earth from every corner of the universe. How long can you hold them off before the planet is pulverised. Enjoy seemingly endless levels of asteroid blasting, rock smashing mayhem; it's massive and relentless obliteration on a grand scale, also loads of fun. Reg Fee $20

500V63 (247413 bytes)

Five Hundred 6.3 plays the popular card game of 500. The objective is to win by collecting 500 points. You can choose your style of play, as well as customise for local rules and options. It has animation and a voice synthesiser which plays through a standard PC speaker. Reg Fee $25+

BBDEMO (889506 bytes)

Break Beat is a fantastic breakout-type game for DOS. You can play a solo game, or play against the computer. Reg Fee $10

CNDQST (3035170 bytes)

Cedric's Quest is a Medieval Adventure game where Cedric, the main character, must travel alone to the Ancient Castle to recover the magically-hidden pieces of the Serpenthead staff and rebuild it. This is the only way to

CLOCKW1
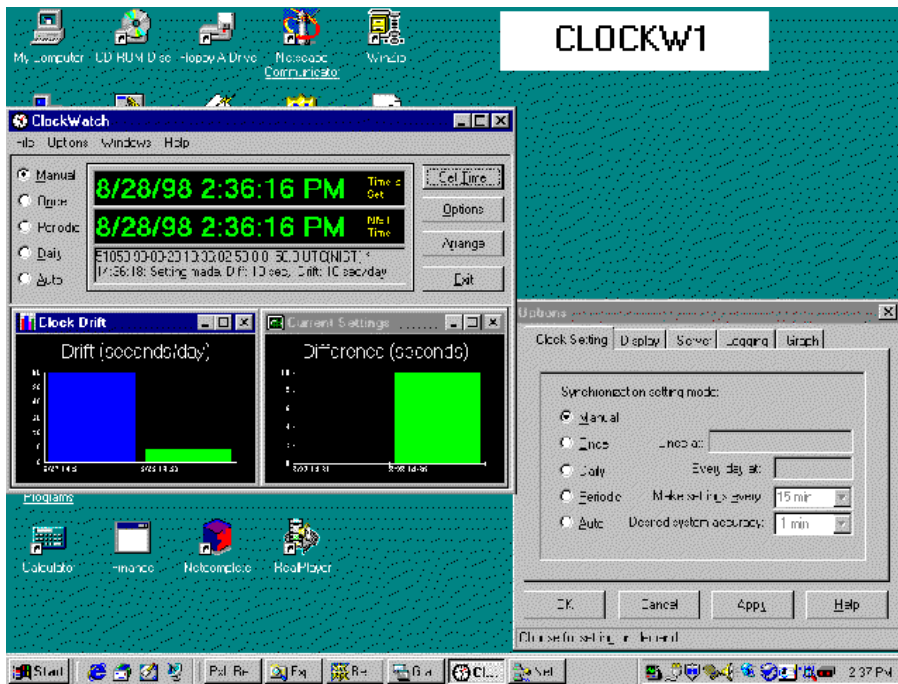
defeat the Dark Sorcerer, whose imminent return has been prophesied. Reg Fee $15

CYBEPLUS (65678 bytes)

Cybersphere Plus is a stunning breakout-type game where bounce a ball against bricks, destroying them and accumulating points. Each playfield is more difficult than the last, and powerups are available to add to the excitement. Reg Fee $17.95

KCHESS22 (181446 bytes)

K-Chess 2.2 is a chess game that shows its own calculations as you play. It includes a hint mode that calculates the best line of attack for several moves ahead. Play against someone else or challenge the computer to a match. K-Chess can be controlled by keyboard or mouse. Reg Fee $20

Cannot find REALITY.SYS. Universe halted.

Computers make very fast, very accurate mistakes.

Computers are not intelligent. They only think they are.

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.

dschwabe@pcug.org.au

POSITION VACANT

Trainers

The PCUG needs volunteers to join the team of trainers in a number of different fields.

You would be asked to train or assist a trainer with a class of up to eight members in our own fully equipped training room.

If you are interested, or want to know more about it, phone or email us.

Email expressions of interest, telling where your expertise lies, to *pcug.editor@pcug.org.au*

Letters

continued…

Dear Anne,

Announcement for all PCUG members who enjoy playing multiplayer games: There is finally a SIG to suit your needs. Starting December, the Multiplayer Gamers SIG (or MGS for short - not to be confused with MSG!) will meet regularly in the PCUG Training room to do what networks are really made for - beating opponents senseless in multiplayer games.

A true SIG for the young and young at heart, regardless of experience (or even if you just want to watch, learn, or get tips and cheats), the MGS will be a flexible and versatile group for people of ALL ages (unless the games are rated M15+ ...), concentrating on all sorts of games, ranging from the non-stop action of 3D Doom-style games like Quake and Unreal, to the patient and strategy-based games like Red Alert and Dark Reign. We might also try our luck in Internet-gaming sites like Battle.net. The potential is honestly endless.

The catch? NOTHING! Not even an entry fee. The MGS is a free service for all PCUG members and invited guests. The first meeting will be in the first week of December (in time for the school holidays!), and the game will most likely be the Blizzard Software classic StarCraft. Contact John Plumidis on 6281 2350 or *email plum@pcug.org.au* to find out more

John Plumidis.

I will put this proposition before the committee, who will be the final arbiters here, but if you're interested, contact John who will keep a list and email the interested parties with the decision.
Cheers
Anne

Oz User Groups

Adelaide PC Users Group
PO Box 2231
Port Adelaide SA 5015
(08) 8331 0766
Meet: 7.45pm, 3rd Wednesday of the month at Enterprise House, 136 Greenhill Road, Unley. Visitors $5.

Brisbane PC Users Group (Brisbug)
PO Box 985
Toowong QLD 4066
(07) 3299 3943   Info Line
(07) 3209 4980 (fax)
Pam Kirk (Pres)
Home page *http://www.brisbug.asn.au*
Meet: Kelvin Grove High School, Kelvin Grove, Brisbane. 9am-5pm approx, 3rd Sunday of the month.

Darwin Computer Users Club
Gary Drake (Vice President)
(08) 8932 4107 h
(08) 8945 0091 w
Email *acsnt@acslink.net.au*

Melbourne PC User Group
2nd Floor, 66 Albert Road
South Melbourne VIC 3205
(03) 9699 6222
10am - 3.30pm
(03) 9699 6499   Fax
Email *office@melbpc.org.au*
Home Page *http://www.melbpc.org.au*
Meet: 6pm, 1st Wednesday of the month (except Jan) at Pharmacy College, 381 Royal Parade, Parkville.

Perth PC Users Group
PO Box 997
West Perth WA 6872
(08) 9399 7264
Terry Vernon (Pres)
Meet 6.00pm, 1st Wednesday of the month at Ross Lecture Theatre, Physics Building, University of WA,   Nedlands.

Sydney PC Users Group
PO Box A2162
Sydney South NSW 2000
(02) 9972 2133
Meet 6pm, 1st Tuesday of the month at main auditorium, Teachers Federation, 300 Sussex Street, Sydney.

Journal of the PC Users Group (ACT) Inc

SIXTEEN BITS @nline

http://www.pcug.org.au/pcug/16bits/

Now in Adobe Acrobat format!

WhAT'S NEWS?

Compiled by Malcolm Morrison

Discovery with Alta Vista

Now you can use AltaVista to search through your own personal computer files! Download Alta Vista Discovery today. It's the remarkable utility that brings knowledge and information together from the Internet and your computer. Whether you are a veteran AltaVista user or someone completely new to the Internet, AltaVista Discovery is the fastest way to quickly find the information you need - wherever it may be.

Using innovative technology, AltaVista Discovery attaches to your browser to search the Web and your computer. Find E-mail, documents, presentations and more! Searching has never been so easy!

IBM's US$599 PC

In the US, IBM has launched an Aptiva PC for US$599 that comes with a chip made by IBM but based on a design from Cyrix. The system also includes a 3.2GB hard drive, CD-ROM drive, a 56-kbps modem, and a slot that can accept upgrade circuit boards.

Technology, Style and Design for the Home

IBM Australia has announced a family of new products - the IBM Aptiva S and Aptiva E Series, the IBM ThinkPad i-series, the IBM IdeaScan, the IBM ZIP 100MB IDE Internal Drive and the IBM 15" TFT flat panel monitor. This family of consumer products combines the best that IBM has to offer in price, performance and design for the home and small office user.

This range of competitively priced products offers customised options for all consumers from the computer novice to the technologically savvy user. For the mobile users, IBM's new ThinkPad i-series allows consumers to play CDs even when their machine is switched off. To accommodate frequent users who require more storage, IBM has introduced its new 100Mb ZIP drive which provides additional storage. And for family fun, creative projects and home office work, the new IBM IdeaScan is the ideal fast and easy to use scanner. "Consumers demand the best technology but many image-conscious users want elegance in style and design before bringing technology home. IBM can provide outstanding technology with innovative design to home-users," said Mrs Vicky Katsabaris, IBM Consumer Product Manager, A/NZ.

In addition to being a travelling desktop, the IBM ThinkPad i-series functions as an audio CD player. The Instant Audio feature allows the user to play music for up to six hours when the system is turned off and closed. These products are now available from major retail outlets around Australia including Harvey Norman, Grace Bros and Dick Smith Electronics.

IBM Ships World's Fastest Hard Drive

On October 27, IBM announced several new hard drives including the world's fastest hard drive shipping for video streaming applications. The power and capabilities of the 10,020 RPM, 9.1-gigabyte (GB) Ultrastar 9LZX make it ideal for use by video producers and movie editors.

This is a thinner (low profile) version of the 9.1 GB model IBM introduced about a year ago and it operates at much lower temperatures. In fact, IBM's 9LZX is the coolest IBM 10,020 RPM drive available. The cooler the drive, the less chance there is of the drive or server overheating. Also, a cooler drive uses less power.

IBM is also introducing an 18.2 GB, 10,020 RPM drive called Ultrastar 18ZX.

Monster Capacity

IBM is also introducing a new 36.4 GB, 7,200 RPM drive which holds eight times as much as the average server hard drive. Ultrastar 36XP can hold a whopping 17 hours of MPEG-2 video, or the equivalent of five Super Bowl games.

IBM's latest server hard drives, including the new ones just announced, are the only storage devices to feature Drive Temperature Indicator Processor or Drive-TIP. This allows users to monitor the temperature of the drive so it can be adjusted if the system environment gets too hot.

Chipping Away At DVD recording

C-Cube is introducing a chip that enables recordable DVD for consumers, the latest product release in the effort to bring DVD recording home.

DVxplore is the first chip that will allow consumers to capture video from analog or digital camcorders and record it to DVD-RAM disks, according to C-Cube. DVxplore also handles the playback of video and audio.

"This enables you to create video on a PC," said Chris Day, director of product marketing for C-Cube. "This chip will compress it down so you can store it on a CD-R, DVD-RAM, or incorporate it into Email." C-Cube counts PC makers Dell and Gateway among its customers, although the chip will also be available in third-party add-in boards, priced at approximately US$299.

Sony Digital Mavica

Finally, a Digital Still Camera with Real Camera Features like a 10x power zoom lens with 1" macro capabilities and auto-focus, auto-iris and auto-white balance for proper exposure and a built-in flash and self-timer. Five Camera Mode Settings allow control of prevailing light conditions. With Sony's new Digital Mavica still camera, adding pictures and images to make professional looking documents has never been easier. Digital Mavica camera records on a standard computer 3.5" floppy so you can play it back on virtually any PC.

Netscape Communicator 4.5 Now Available!

The latest release of the world's most popular browser suite is now available free from Netscape Netcenter. This version of Netscape Communicator features Smart Browsing, high-performance Internet email, multimedia integration, and much more. Communicator 4.5 is the first major release that works seamlessly with all Netcenter services, delivering today's best web experience.

As the Internet grows more complex, users often find it difficult and time-consuming to locate the information they need. Smart Browsing helps solve this problem by adding intelligence to the navigation process. Netscape has worked hard to ensure that Communicator 4.5 is the highest-quality release. To that end, Communicator 4.5 includes more than 4000 enhancements to improve user experience, performance, and reliability. solution.

Dell - The Best Gets Even Better

The Dell Dimension XPS R350 R400 and R450 featuring the Intel Pentium II processor with MMX technology Power and speed to meet your increasing needs. Astounding graphics and multimedia. Huge, faster hard drives. Proven, cutting-edge technology. New Pentium II processor featuring MMX technology. Outstanding speeds of 400 and 450MHz! New 440BX chipset and 100MHz system bus. High-performance 100 Mhz SDRAM memory (expandable to 384MB!). DVD and A3D sound for amazing multimedia performance. AGP Video Technology for tremendous 2D or 3D graphics.

Mac OS 8.5

The world's most Internet-savvy operating system now comes with Sherlock, your personal search detective. Sherlock gives you the power to find information around the world, on your hard disk or inside your files.
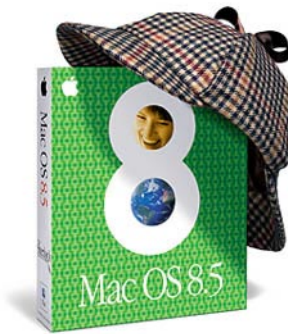
Up to five times faster than the OS you have in your Macintosh now, Mac OS 8.5 is just plain smarter—and a lot more helpful, too, with a host of intelligent features to streamline and automate the things you do every day.

What is AOL?

AOL is the world's most popular Internet online service with more than 13 million members worldwide. AOL was started in 1985, with the vision of forging a mass consumer market for interactive services and forming a true global community around its members. Today AOL is a global brand and is the fastest growing provider of Internet online services in the world.
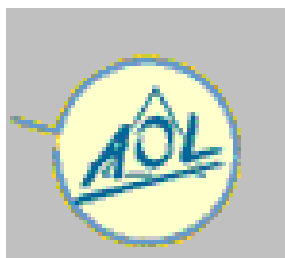
The launch of AOL in Australia brings the world's most convenient and easy-to-use online experience to Australians and promises the benefits of this new medium to the mass consumer market. The service incorporates a multimedia interface, integrated Internet access and media-rich content, as well as AOL's exclusive features including communication and personalisation tools such as e-mail, Instant Messenger™ and Buddy List™ features, message boards,

built-in chat, news profiles and parental controls. Each AOL screen name also gets two megabytes of disk space to use for a home page – enough space for ten or more pages with images. (You can create up to five different home pages on your account, one for each screen name.)

To make it easy for Australians to try the service, AOL is offering a 100-hour/30 day free trial (with no registration fee). AOL offers service at two affordable price levels, AOL Now, the standard offering, is $9.95 per month with three hours of service (and additional hours at $4.00 per hour.) For members who like to spend more time online, once registered, AOL offers AOL Extra with 15 hours per month for $29.95 (and additional hours at $4.00 per hour.)

ITU Says Yes to G.Lite ADSL

The Universal ADSL Working Group (UAWG) has applauded an International Telecommunications Union (ITU) vote that officially sanctioned the G.Lite ADSL (Asymmetric Digital Subscriber Line) standard. The G.Lite standard is expected to accelerate the international rollout of high-speed Internet access to consumers over existing phone lines.

Meeting in Geneva, the ITU voted to "determine" the standard for G.Lite. The determination vote is seen by manufacturers and service providers as crucial because it reflects the technical stability of the standard and provides the specifications that manufacturers and service providers need in order to bring compatible products to market. In the case of the V.90 modem standard, for example, the ITU determined the standard on February 6, 1998, and within weeks manufacturers were shipping V.90-compliant products well in advance of the final ratification on September 16. Final ratification of the G.Lite standard is anticipated at an ITU meeting in June of 1999. In Coral Gables, Florida, BellSouth and Lucent Technologies have announced a six-month trial of both full-rate ADSL and G.Lite ADSL service on the University of Miami campus beginning in December. G.Lite ADSL modems are forecast to be a preferred PC modem technology by the year 2000. Visit the group's Web site at www.uawg.org

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 that 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: 12 months: **$120.00**   ❑

6 months: **$65.00**   ❑

3 months: **$35.00**   ❑

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 to 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 that organisation expires, so too does your membership of 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. For more details, refer to *http://www.tip.net.au/tip/charging*

7. Limited Access
   a) Limited Access provides terminal-based email and news only.
   b) Limited Access is free on application.
   c) In any calender year, calculated from the 1st February, Limited Access provides up to 100 'hours' usage.

8. Full Access
   a) Full Access provides PPP or SLIP access and includes email, news, WWW, etc.
   b) Advance Access is not free. Current rates are shown at left with up to 25 'hours' per month usage over the period.
   c) When your Full Access subscription expires OR you use up your hours of access (whichever is earlier), you will be required to purchase another subscription.
   d) 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. For existing members, please allow up to two weeks for your application to be processed.

11. 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.

12. 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. 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 memberhip 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)

*   zip drives.

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

Stuffed Again

We would like to thank
the following members and friends
for assisting with
the mailing out of our Journal.

Frank & Sylvia Airey
Bruce Black
Owen Cook
The de Bear family
John Hempenstall
Emil Joseph
Neville Maddern
Anne Meade
Allan Mikkelsen
Don Nicol
Keith Sayers
Rod Smith
Harry Souter
John Starr
Carol & Charlie Syms

Graeme Taylor
Ted Tregillgas
Gordon Urquhart
Marion Van Wely
Sylvia & Lew Yardley

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. If you would like to help, please ring Petra Dwyer at the PCUG Centre on 6253 4911.

Next Stuffing

5.00pm **Monday 21 December '98**
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

Coffee & Chat

The Coffee and Chat Group meet at the PCUG Centre in Belconnen on alternate Tuesdays from 10.30am to 11.30am The doors are open from 9.30 to 12.00 for 30 minutes of individual discussion before and after the meeting. The dates of these meetings are shown in the Calendar of Events.

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 (except January) 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 David Gray email *graydr@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

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
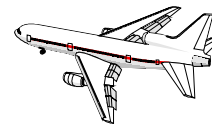
Flight Simulator

Meets 1.30 - 3.30 on Tuesday afternoons (if room available) following Coffee and Chat and on every 2nd Wed at 6.30 - 8.30 pm at the PCUG Centre. Enquiries welcome. Roger Lowery (02) 6258 1583 *lowery@pcug.org.au*

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.*

Linux User Group

Stephen Rothwell 6231 6648 (ah) *Stephen Rothwell@canb.auug.org.au* 4th Thursday 7.00pm Room N101 Computer Science Dept ANU.

The VB SIG

Meets 10am to 12Noon on alternate Thursday mornings (in the Coffee & Chat week) to discuss the tips and tricks not disclosed in the Help files. Enquiries welcome.
Don Nicol (02) 6254 6584 *dnicol@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
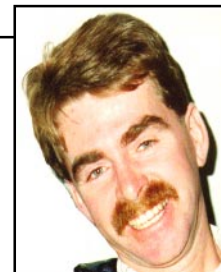
The program for 1998 has been adjusted to meet the demand for particular courses especially Windows95 and Internet courses. PCUG Training is able to, and willing, to conduct a variety of courses in other areas of computing. If you have an interest in a particular computer course and it is not scheduled, contact Petra at the Centre at the Centre 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.

Courses

The **Full Access intro to the Internet** course is an introduction to the programs used to access the World Wide Web including how to download files, send and receive e-mail and participate in news groups. If you would like to attend the course, you will need Full Access (Advanced Access) to the Internet. **Please note that Netscape Communicator** 4.05 will be used to teach this course. There will still be courses conducted that are specifically designed for members who use Netscape3, Eudora and Agent to access the Internet (see September 13 and October 31, below).

Microsoft Word 7- Intro: In January 1999 a Introduction on Microsoft's Word7 will be conducted at the Centre. This powerful word processing program is ideal for those members who would like to learn more about word processing. Word 7 forms part of the Microsoft Office suite and offers the ability to create Word documents, templates, letters and linking or embedding (OLE) Word into other Window's applications.

NB:
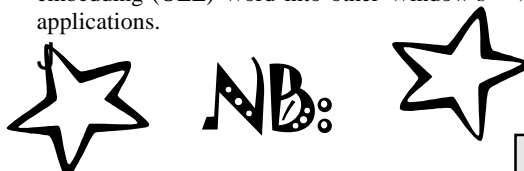
T*he PCUG is seeking members with some experience (either Win95, MYOB or Internet software eg. Netscape), that can help out the group by training members on weekends. It's voluntary work of course, so if you're (even slightly) interested and would like to help, please call Peter on 6258 9806.*

Contacts

COURSE BOOKINGS: **Petra Dwyer, at the PCUG Centre on 6253 4911**
Training coordinator and course information (**not** bookings):
Peter Elliott 6258 9806 (h) 7.00pm to 9.00pm
Microsoft Product courses (**not** bookings): Henk Brummelaar 6258 9332 (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.

	Date	Day	Course	Length
Dec	5	Sat	Sixteen Bits Layout Day/Internet Clinic	Clinic:Morning
	6	Sun	Intro to the Internet - (for members who use Netscape 3, Eudora and Agent) - Full access	Full Day
	12	Sat	MYOB	Full Day
	13	Sun	Visual Basic Programming – Intro	Full Day
	19	Sat	CLOSED	Full Day
	20	Sun	CLOSED	Full Day
	26	Sat	CLOSED	Full Day
	27	Sun	CLOSED	Full Day
Jan	2	Sat	CLOSED	Full Day
	3	Sun	CLOSED	Full Day
	9	Sat	*Sixteen Bits* Layout Day/Internet Clinic	Clinic:Morning
	10	Sun	Win95 - Intro	Full Day
	16	Sat	WORD7 - Intro	Full Day
	17	Sun	Intro to the Internet - Full access (ideal for members with some experience)	Full Day
	23	Sat	CLOSED	Full Day
	24	Sun	CLOSED	Full Day
	30	Sat	Win95 - Intro	Full Day
	31	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				
Ivan Kramer Web Design	Proven experience, quality graphics, artistic talent. Publish online @ a fracion of the cost of print.	Ph: 6259 0500 Mobile: 0413 967 045 Email: ivan@pcug.org.au www.pcug.org.au/~ivan/	Canberra	$200 (66% off normal price of $600) for all graphics, logo, design, up to 15 pages
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
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)
Clarion Database Systems	Computer consulting Business applications, development Software sales	Mobile: 041 108 7754		10% off RRP on Microsoft and other vendor products and consulting services
The Cartridge Factory		Ph.: 6239 5259	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

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BUSINESS	SERVICES/PRODUCTS	PHONE/FAX/EMAIL	ADDRESS	DISCOUNT
Computer related (cont)				
Bettowynd & Taltech Solutions	Prompt, gauranteed, fixed price repairs to monitors and terninals	Ph: 6239 1043	Unit 5, Centrecoure 1 Pirie St, Fyshwick	5% discount
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
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	Suppliers of all business, educational and personal software, plus selected hardware.	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/Mobile PC Support	Home PC support available for all PC problems including upgrades and tuition at your place – all hours	Ph: 6251 2184 Fax/Message: 62512184 Mvetz@pcug.org.au	P.O. Box 485 Belconnen ACT 2617	Discount of $25 per hour – maximum charge $50
Kelehe Bisnis Sevis	ACT written software for home & small business from Total Office Management.New release of Automobile Workshop Business Systems	Ph: 02 6231 1813 jardee@effect.net.au	P.O. Box 1187 Tuggeranong ACT 2901	5% for single copies, higher discounts for resellers
World Wide Web Consultants Canberra (W3C2)	Your key to the Internet. Training, consulting and web site services.	Ph: 02 6292 3211 Fax: 02 6292 3914 Mobile: 019 440 608 Email: fcmoore@w3c2.com.au	PO Box 5145 Chisholm 2905	5% to a maximum of $100 on web site services.
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
Green-Grass Mower Service	Lawn mower service, spares and repairs	Ph: 6291 1458	8 Hutchinson St Monash	10% discount
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

Members' Ads

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.
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
Bulletin Board Service	Michael Phillips *	6253 4966	All days	7.30pm - 8.30pm
C/C++	Nhan Tran *ntran@pcug org.au*	6254 5292	All except w/end & Tue	7.00pm – 9.00pm
Chinese Star for Windows	Peng Lee	6258 0156	All days	1.00pm - 9.00pm
Eudora	Nhan Tran *ntran@pcug org.au*	6254 5292	All except w/end & Tue	7.00pm – 9.00pm
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
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*			
HDK	Ivana Leonard	6231 4169	Mon - Thu	7.00pm - 9.00pm
Hypertext Markup Language	Peter Tilbrook *webmaster@dynamite.com.au*	6242 4000 0411 508 169	Weekdays	10.00am – 6.00pm 6253 8153 (ah)
Internet Connection	Nhan Tran *ntran@pcug org.au*	6254 5292	All except w/end & Tue	7.00pm – 9.00pm
Internet Explorer (Microsoft)	Peter Tilbrook *webmaster@dynamite.com.au*	6242 4000 0411 508 169	Weekdays	10.00am – 6.00pm 6253 8153 (ah)
ISR CADDSMAN Modeller (Win)	Neil Moffat	6292 7108	All days	Noon - 10.00pm
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
Microsoft Front Page	Peter Tilbrook *webmaster@dynamite.com.au*	6242 4000 0411 508 169	Weekdays	10.00am – 6.00pm 6253 8153 (ah)
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
Online doc using Help Compiler (Win3)	John Carroll *jcarroll@pcug.org.au*	6248 0781	All days	7.30pm – 10.00pm
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
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
Unix/Linux/*BSD	Jonathon Ross	6288 1428	All days	6.00pm – 10.00pm
Turbo Pascal	Michael Phillips *	6281 1980	All days	7.30pm - 8.30pm
Visual Basic for Windows	Cedric Bear *cbear@interact.net.au*	6258 3169	All days	7.30pm – 8.30pm
Windows 95	Graeme Challinor *gchallin@pcug.org.au*	6236 8166	All days	10.00am - 4.00pm
Windows 95 and 98	Chess Krawczyk *ckrawczy@pcug.org.au*	6247 1218	All days	7.00pm – 9.30pm
Word for Windows	Lis Shelley *lis@nullarbor.com.au*			
WordPerfect 5.1 DOS, 6.1 Win	Gayle Scott *gayles@pcug.org.au*	6254 1579	All days	7.30pm - 9.30pm
WordStar	Dave Hay	6258 7310	All days	7.00pm - 9.00pm

December

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Flight Simulator PCUG Centre *1.30pm–3.30pm* Coffee and Chat PCUG Centre *9.30am–12.00* **1**	**2**	Networks SIG *(Call 6241 2399 for venue)* Visual Basic SIG *10.00am–12noon* PCUG Centre **3**	Sixteen Bits Commercial ad deadline for January **4**	Internet Clinic PCUG Centre *9.30–1.00pm* Layout Day for Sixteen Bits *10.00am* **5**	TRAINING DAY PCUG Centre *9.30am* Intro to the Internet – Full Access **6**
Internet Day-time Demo and Discussion SIG PCUG Centre *10.00am–2.00pm* New Members' Night PCUG Centre *7.30pm* **7**	C /C++ SIG PCUG Centre *7.30pm* **8**	Flight Simulator PCUG Centre *6.30pm–8.30pm* **9**	Committee Meeting PCUG Centre *7.30pm* **10**	**11**	TRAINING DAY PCUG Centre *9.30am* MYOB **12**	TRAINING DAY PCUG Centre *9.30am* Visual Basic Programming – Intro **13**
14	Coffee and Chat PCUG Centre *9.30am–12.00* Flight Simulator PCUG Centre *1.30pm–3.30pm* Delphi SIG PCUG Centre *7.30pm* **15**	**16**	OS/2 SIG IBM Building 8 Brisbane Ave Barton Visual Basic SIG *10.00am–12noon* PCUG Centre **17**	**18**	**19**	**20**
16 Bits Stuffing and Mailing PCUG Centre *5.00pm* **CENTRE CLOSED** **21**	**CENTRE CLOSED** **22**	**CENTRE CLOSED** **23**	**CENTRE CLOSED** **24**	**CENTRE CLOSED** **25**	**CENTRE CLOSED** **26**	**CENTRE CLOSED** **27**
CENTRE CLOSED **28**	**CENTRE CLOSED** **29**	**CENTRE CLOSED** **30**	**CENTRE CLOSED** **31**	**CENTRE CLOSED** **1 Jan**	**CENTRE CLOSED** **2 Jan**	**CENTRE CLOSED** **3 Jan**