

Official Magazine of the MELBOURNE PC USER GROUP INC.

PC UPDATE



**OPTICAL FIBRE
HAS ARRIVED!**



www.melbpc.org.au

THE PURPOSES OF THE GROUP are to conduct, on a non-profit basis, activities aimed at the effective utilisation of the personal computer and to endeavour to achieve such effective utilisation by means of:

- Advancing computer literacy
- Advancing the art and science of information processing through education and interchange of ideas
- Keeping members abreast of developments in computing and information technology and enabling members to exchange information and experience
- Representing computer users in public debate and by acting and speaking on their behalf where they would be affected by proposed legislation or other regulatory measures

- Providing a forum for the exchange of views amongst computer users and between computer users and the computer industry
- Co-operating supporting or joining with, or in, other organisations with similar purposes
- Undertaking other activities beneficial to the Group

In order to further its purposes the Group shall have the rights, powers and privileges of a natural person.

FEBRUARY 2012 • VOLUME 29 • ISSUE 01

PUBLISHED BY

MELBOURNE PC USER GROUP
INCORPORATED

EDITOR

Roger Wragg

ASSISTANT EDITOR

Ian Rankin

ART DIRECTOR/DESIGNER

Maria Vallianos

CONTRIBUTORS

Lloyd Borritt

Roger Wragg

Adam Turner

Patrick Brennan

MONTHLY DISCS

TRAINING INFO

MONTHLY MEETINGS

CALENDAR & MAPS

NEWSGROUPS

Gordon Woolf

David Hatton

Ron Savage

Stewart Adam

Ian Rankin

Patrick Brennan

Ray Beatty

John Swann

Richard Solly

copyrights © 2011

Melbourne PC User Group Inc and individual authors. Except where otherwise stated, all material is the copyright of the author. Contributions from contributors marked above MAY not be copied without the express written permission of the author. Except where otherwise stated material on this disc may be copied by non profit PC User Groups without fee provided that there is no restriction published with the article, copies are not used for commercial advantage, and the origins of the material and this permission to copy are acknowledged in the reprinted item.

contributions

All authors must lodge a complete submission form (available on our web page) that confirms that the article is previously unpublished (if previously published, the author must have the right to authorise republishing), and original, save

for any content which is properly credited, and that Melbourne PC User Group Incorporated may publish the article on one or more occasions on paper, the internet or otherwise, edit the article and/or permit republication by non-profit organisations. Please read the style guide on our Web Site.

submissions

E-mail your articles, reports, reviews, and free ads to our email address editorpc@melbpc.org.au. All submissions should be sent as file attachments and they must be plain, unformatted (ASCII) text file or ZIP file with accompanying graphics. Do not pack them inside self-extracting EXE files.

graphics

Supply graphics as high quality JPEG images.

For all advertising enquiries:

Phone 9276 4000

Melbourne PC User Group Inc.,

Suite 26, Level 1,

479 Warrigal Road,

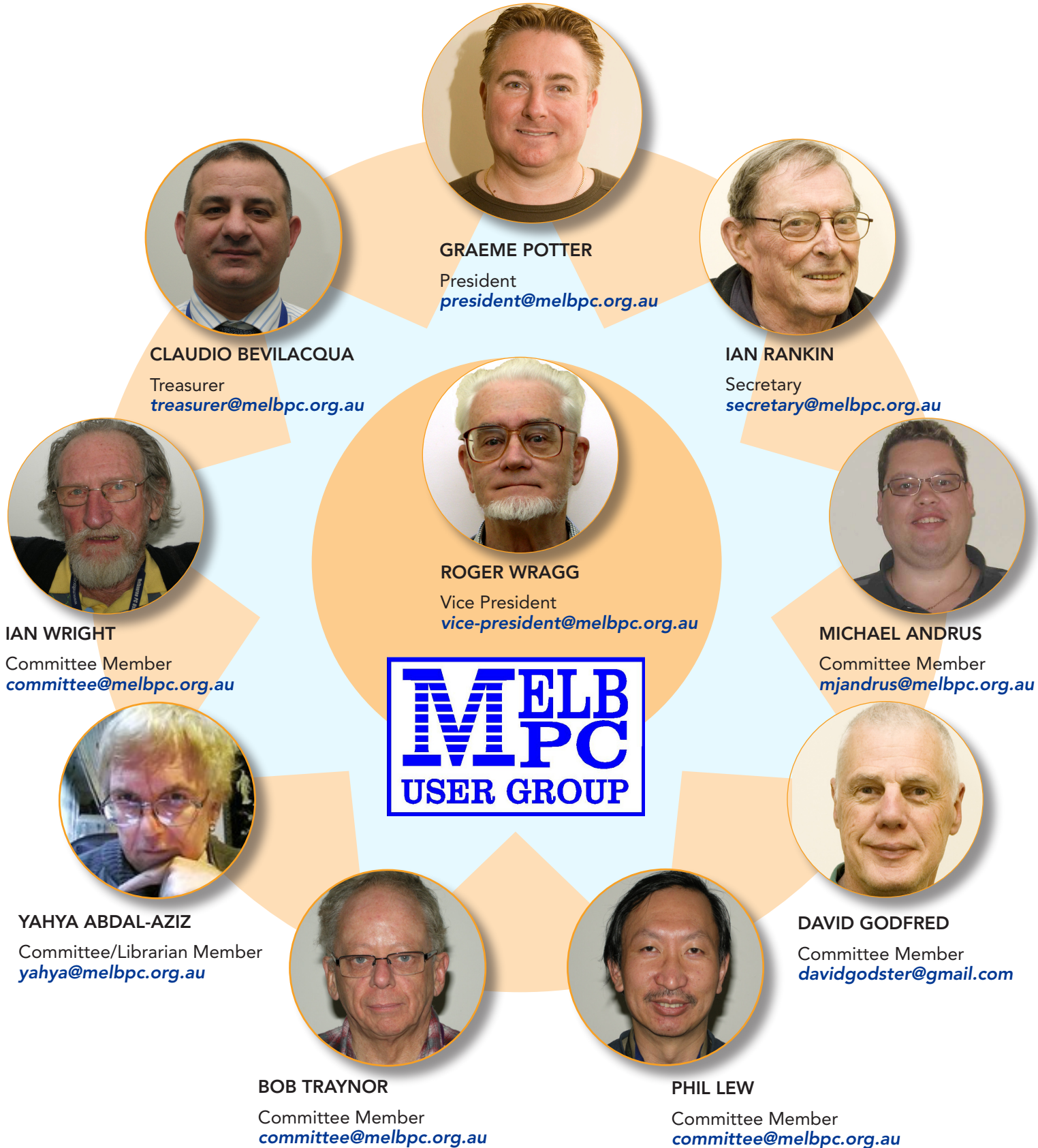
Moorabbin, VIC 3189

REGULARS & FEATURES

<i>Committee Members</i>	04
<i>Directory Services</i>	05
<i>President's Update</i>	06
<i>Editor's Note</i>	07
<i>Treasurer's Report</i>	14
<i>Letters To The Editor</i>	15
<i>Calendar</i>	16
<i>Meeting Details</i>	17
<i>ARTICLES – A History Of Melb PC</i>	18
<i>Father Of The PC</i>	27
<i>Ultrabooks Are The Next Best Thing</i>	29
<i>Suicide Prevention Software – Anyone?</i>	31
<i>Using Live CD's – Part 1</i>	33
<i>Cable 'V' ADSL – Part 1</i>	39
<i>An Introduction To Web Hosting</i>	42
<i>Various Matters To Do With Web Servers</i>	47
<i>Lenovo Thinkpad Tablet</i>	55
<i>Author Submission Form</i>	61
<i>SIG DETAILS</i>	62
<i>SIG REPORTS</i>	72
<i>Training Schedule</i>	88
<i>MONTHLY DISC</i>	97
<i>Monthly Disc Order Form</i>	102
<i>Membership Application</i>	104
<i>DIAL HELP</i>	105

MELBOURNE PC COMMITTEE MEMBERS

committee@melbpc.org.au



directory committee management & online services info

OFFICE, MEMBERSHIP, DELIVERIES

Unit 26, 479 Warrigal Road, Moorabbin VIC 3189
(9am – 5pm)

Phone: 9276 4000

Fax: 9553 0475

E-mail

office@melbpc.org.au

Office Manager

Dianne Vogt

Sharon Williams

FIRST AID & INTERNET HELP LINE

(10am – 3pm) 9276 4088

This line is answered only when a volunteer is available between 10am – 3pm Monday to Friday. Outside these hours please leave a brief message and your membership details. An **iHelp** team member will call you back when available. Alternatively please refer to the **Dial Help** listing.

MANAGEMENT COMMITTEE

committee@melbpc.org.au

President

Graeme Potter

president@melbpc.org.au

Vice-President

Roger Wragg

vice-president@melbpc.org.au

Treasurer

Claudio Bevilacqua

treasurer@melbpc.org.au

Secretary

Ian Rankin

secretary@melbpc.org.au

Members

Yahya Abdal-Aziz

yahya@melbpc.org.au

David Godfred

davidgodster@gmail.com

Phil Lew

committee@melbpc.org.au

Bob Traynor

committee@melbpc.org.au

Michael Andrus

mjandrus@melbpc.org.au

Ian Wright

committee@melbpc.org.au

ONLINE SERVICES

Melb PC BBS (4 lines, up to 28.8 kbps) 9553 0488

Internet Service Melbourne Local Access 9697 4000

Intranet Service Melbourne Local Access 9697 4004

Melb PC Home Page <http://www.melbpc.org.au>

Internet Services Page <http://www.melbpc.org.au/isp/>

Internet Help Service Page

<http://ihelp.melbpc.org.au/helpdesk/iuser/index.asp>

PC UPDATE MAGAZINE
CLOSING DATE FOR MONTHLY
SUBMISSIONS

**IS ALWAYS THE FIRST
DAY OF THE PRECEDING
MONTH**



MELB PC PRESIDENT'S COLUMN FEBRUARY 2012



I AM AN OH&S and business development consultant. I worked for Victoria Police, Dept of Justice, Toll Transport, Pacific National, Pharmacy Guild, many local Hospitals etc. These undertakings were to improve processes, increase revenue & profit.

I have introduced Wireless Internet to the Club. I hope to make available ADSL, Mobile phone plans, products & services to existing members and to attract new members to MelbPC.

I have found a printing company that will PAY MelbPC, to print PCUpdate magazine in full colour. I have many ideas to help the club continue to exist and flourish in the future.

PRESIDENT
Graeme Potter
president@melbpc.org.au

MELB PC EDITOR'S NOTE



*"...optic fibre cable
was finally installed at
our clubrooms."*

BIG NEWS THIS MONTH, on the sixteenth of December 2011 the optic fibre cable was finally installed at our clubrooms. Yours truly was there to record the event. The drilling machine was set up in the Bunnings car park directly over the road from our clubrooms. The machine established an underground passage across Warrigal road through which the cable passed finally to emerge in the main electrical switch room for the estate. It then passed over the switch panel and was carried across the basement car park on an existing service rack then finally into our own server room. In the server room fancy electrical equipment will convert the pulses of light into electrical signals that will carry our Internet traffic to and from the clubrooms. This system will replace the very slow ADSL link we have with the Telstra exchange at Mentone, which is just on the distance limit for effective ADSL service.

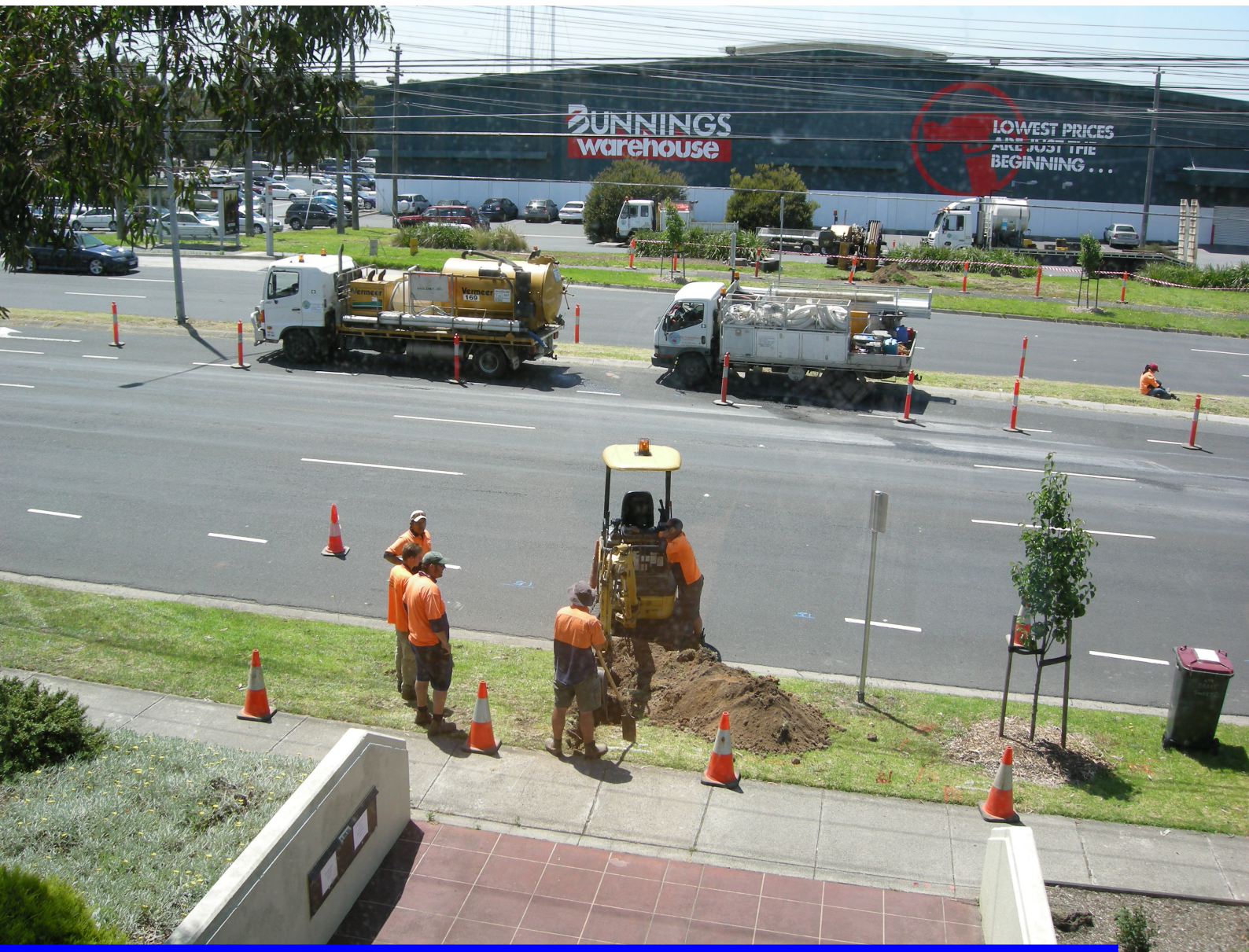




EDITOR'S NOTE cont'



EDITOR'S NOTE cont'





EDITOR'S NOTE cont'

I HAVE LEARNT that some members still cannot navigate to the tutorial on the PCUpdate CD. This tutorial might be able to help members view the PCUpdate pdf file. Press both the windows and E keys at the same time, this will open windows explorer. Locate the CD icon and RIGHT CLICK on it. A context sensitive menu will pop up (just like an Apple computer). Now click on the OPEN option. This will give you a view of the CD contents.

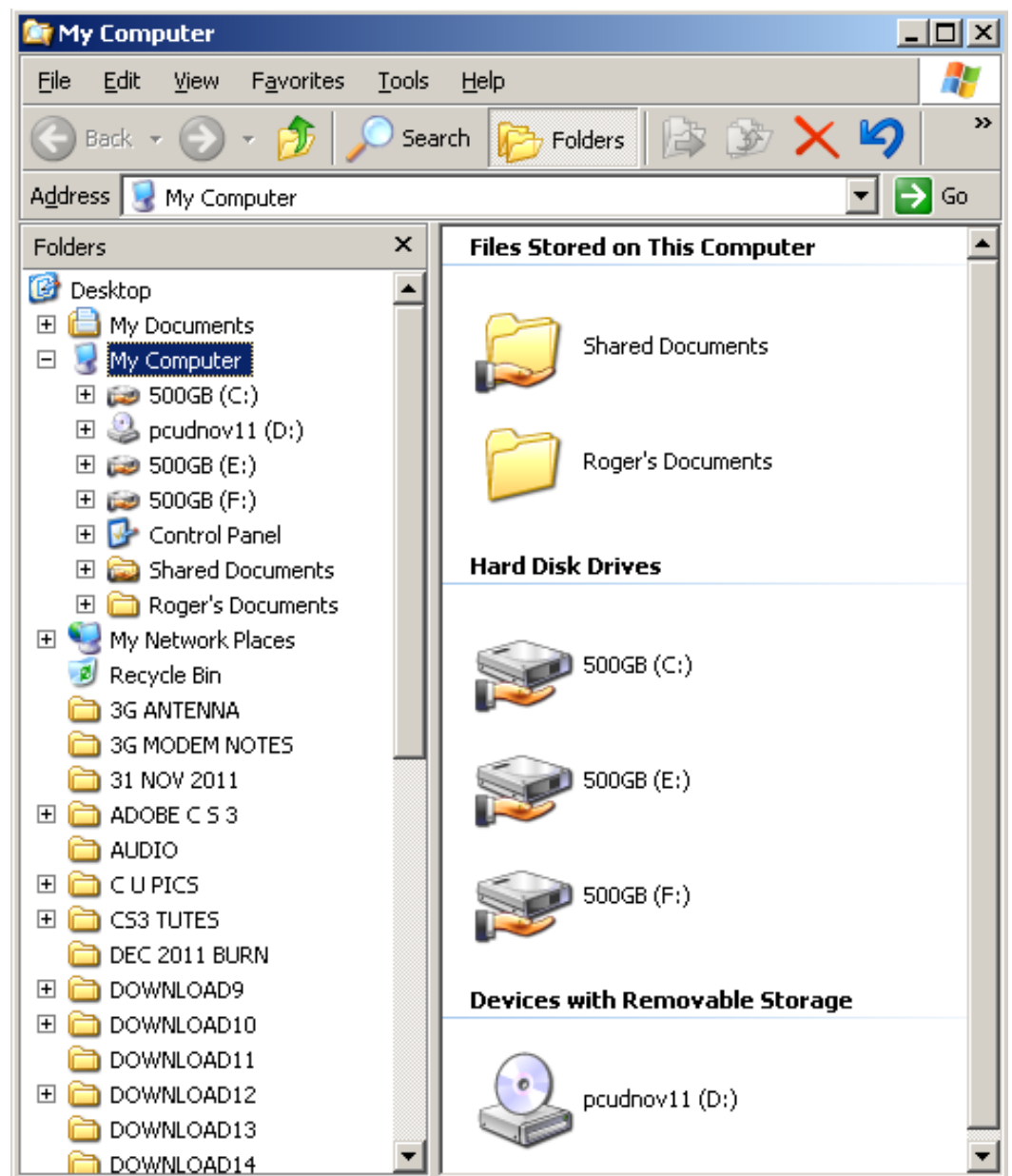
Remember to set the volume as there is a voice over on the tutorial, now click on the WMV file this should open the file in windows media player (or your own favorite player such as VLC)

If you are having difficulty reading PCUpdate then please take a moment to view the short video tutorial on this CD.

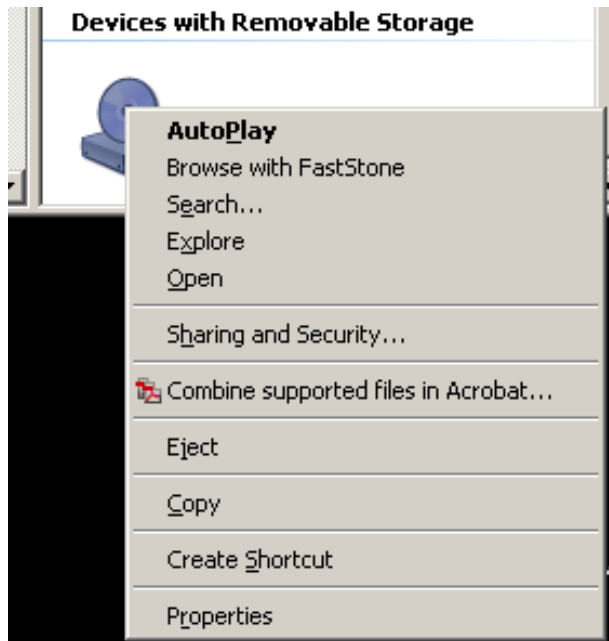
Roger Wragg
Editor

editorpc@melbpc.org.au

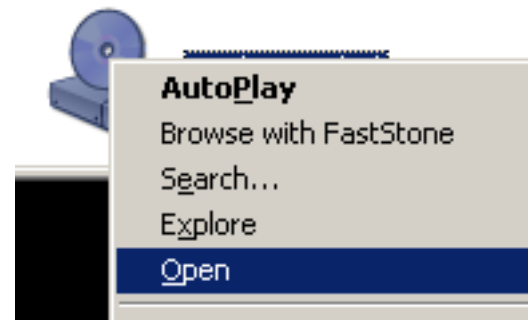
1



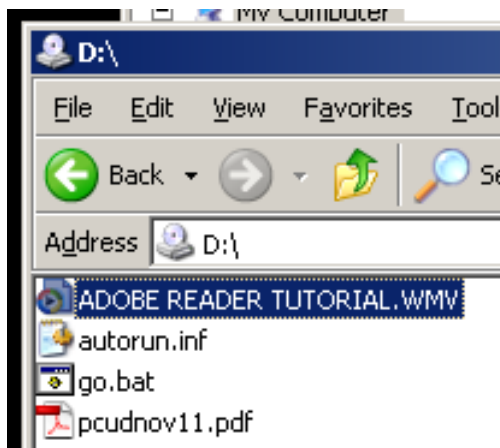
2



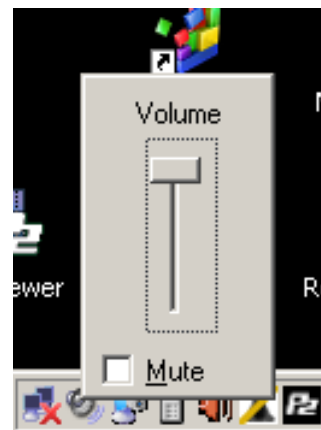
3



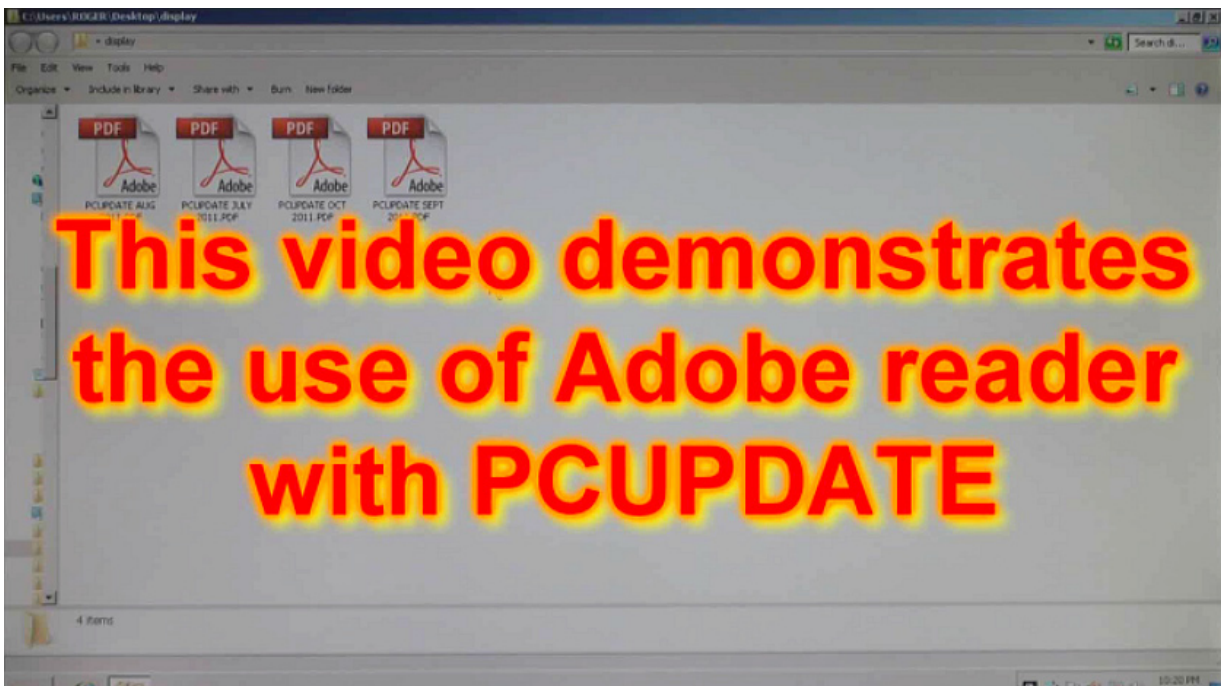
4



5



6





JANUARY 2012

HAVING JOINED the Melbourne PC User Group in November 2010, the last 12 months has been a significant but yet rewarding challenge.

Under the leadership of Keith Younger, the Committee began the process of reviewing the costs associated with each of the services. Unfortunately there were a number of costs that were depleting the Club of funds. As a result, changes were made to the production of the magazine. This initiative has resulted in a saving of \$10,000 a month. With the introduction of Graeme Potter as the new President for 2012 further changes will be forthcoming which may also see the resurrection of the magazine for those who would prefer a printed version.

The club has taken the initiative to implement fibre optic in order to support the roll out of new products and services. Services to follow will be the introduction of "Lan Gaming", Data Backup, Rack Servers, Email and Web Hosting, Group Buy Ins, Training & Educational services. During the period of change, the use of the "Burnley" site which has long hosted the Club's server will be made redundant. The decision to do so is based on the fact that the club is heavily reliant on a single volunteer to administer the services. In addition, the costs of maintaining Burnley is similar to that of using the services of a professional firm such as Technicalities (which is located in the immediate vicinity of the club). Therefore the responsibility of maintaining the service will be moved to an industry participant, utilising their state of the art equipment. Moving the server in-house would have resulted in considerable upfront cost which is not financially prudent at this point in time, as the cost was estimated to be over \$130,000.

I am pleased to report to the members that the December 2011 Profit & Loss reported a profit of approximately \$4,000 for the month, thereby validating the decisions implemented by the Committee to turn around the Club's finances. The Committee has made it a goal for 2012 to consistently post a profit of \$10,000 a month which will over time allow for further investment in the SIG Groups; as I see it, the Club's lifeline. In order to maintain member levels, new products and services will be implemented supported by different pricing structures. In addition, the Committee is undertaking a feasibility study which will allow its members to create a revenue stream as part of a referral system. The Committee will provide an update in due course. Finally may I take this opportunity to ask all members to provide suggestions to the Committee so that the club is maintained and grows and left for the next generation.

May I extend the seasons greetings to you and your loved ones and may your God keep you safe.

Regards

Claudio Bevilacqua
Treasurer, Melbourne PC User Group

LETTERS TO THE EDITOR



WE ARE LISTENING

Early this year I submitted an expression of interest in the proposed Melb PC wireless broadband. I was out of Australia at the startup date of the service but on my return I noted that some members were experiencing difficulties. I also noted that signal strength on an Optus mobile phone at my address in Carrum was only 2 or 3 bars and somewhat variable. I therefore decided in August to try prepaid wireless on the Optus network (Virgin) to see whether it was workable.

The results to date using the the Huawei E153 USB Modem supplied by Virgin have been as follows.

There were some setting up problems but the Virgin help desk was very good.

When the system was up and running there were still a couple of issues.

1. The modem software installs numerous drivers (Windows XP SP3 system). One of these caused malfunction of the (unused) floppy drive A:, continuous attempts to load a disk. This was only stopped by disabling the driver.

2. There is some interference (apparently from other Optus users) which is evident as occasional high pitched buzzing in my PC speakers.

Performance varies with time of day and is frequently poor between 4pm and 9pm. The best speed I have observed was 3.13 Mbs. This speed has only been reached once, it is usually less than 1.5 Mbs. Speed can sometimes drop to zero followed by dropout of the connection. In busy times it could be that dialup would be better. Signal strength changes abruptly and the connection continually switches between HSDPA/ UMTS/ EDGE/ GPRS. The E153 USB modem supplied to me does not have an antenna socket.

During quiet times my experience is that Optus wireless performs roughly 20 times faster than dialup and that it is easy to download files of 20 to 30 MB in a reasonable time. The 1.5GB download limit does not seem to be a big issue as it is unlikely to be reached at the available speeds. After a few months further evaluation I will consider transferring to the Melbourne PC service. The alternative for those unable to get ADSL2+ seems to be Big Pond wireless but it is expensive and Telstra is difficult to deal with.

Jim Dunlop MEMBER #14770



What's On In February 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<div> Have A Question Post It On http://groups.melbpc.org.au/~anywhere/ </div>			1 Monthly Meeting Moorabbin 7pm Sharp <i>and afterwards the WAFFLE SIG</i> Video Production <i>(Sony Vegas 10am)</i> Introduction to Android <i>(session 1 of 2)</i>	2 Video Production <i>(Premiere Pro 2pm)</i> Ballarat <i>(7.30pm - 9.45pm)</i> Sunbury Daytime <i>(New Users 9.30am)</i>	3 Essendon <i>(Main Meeting 9.30am)</i> Multimedia (MHE) <i>(Wadham House 10am)</i>	4 Build a PayPal Shopping Web Site
5	6 Windows <i>(6.30pm - 9pm)</i> Peninsula <i>(Main meeting 7pm Q&A and Presentation T.B.A.)</i> MS Excel VBA <i>(session 1 of 3)</i>	7 North East Genealogy <i>(10am - 12.45pm)</i> PowerPoint	8 Communications <i>(7pm - 9.30pm)</i> Microcontroller Programming <i>(7pm - 9.30pm)</i> East <i>(7.30pm - 10pm)</i> Introduction to Android <i>(session 2 of 2)</i>	9 E-Book <i>(7pm - 9.30pm)</i> NeDay GIG <i>(Photography - Digital Imaging 10am)</i> Sunbury Daytime <i>(New Users 9.30am)</i>	10 Casey PC <i>(Hampton Park 12.30pm)</i> Essendon <i>(PC Basics 9.30am)</i> Ripper <i>(Hardware Wadham House 10am)</i>	11 Making Money On The Internet <i>(10am - 12noon)</i> Beginning HTML CSS for Beginners
12 East Workshop <i>(10am - 4pm)</i>	13 Access <i>(6.30pm - 8.30pm)</i> Linux & Open Source <i>(6.30pm - 9pm)</i> Peninsula <i>(New Users 4pm Skype and V.O.I.P.)</i> Wyndham <i>(General 7.30pm - 9.30pm)</i> MS Excel VBA <i>(session 2 of 3)</i>	14 WASINT <i>(10.30am - 12.30pm)</i> New Users East <i>(7.30pm - 10pm)</i> Programming MS Excel with VBA <i>(session 1 of 2)</i>	15 Android <i>(Ivanhoe 10am)</i>	16 Music <i>(7.30pm - 9.30pm)</i> Bayside <i>(Main meeting 10am)</i> Sunbury Daytime <i>(General Meeting 9.30am)</i> Linux <i>(session 1 of 2)</i>	17 Essendon <i>(Advanced Users 9.30am)</i> Ripper <i>(Digital Photo W'shop Wadham House 10am)</i>	18 JavaScript
19 MACE <i>(10am - 2pm)</i> Beginners East <i>(10am - 12.30pm)</i> Genealogy <i>(1pm - 3.30pm)</i> Macedon Ranges <i>(Gisborne 2pm - 4pm)</i>	20 Graphics <i>(7pm - 9pm)</i> Nth Subs Linux <i>(7.30pm - 9.30pm)</i> Peninsula <i>(9.30am Presentation T.B.A. Graphics 12.30pm Genealogy 2.30pm)</i> Video Inner East <i>(Balwyn 7pm - 9.30pm)</i> MS Excel VBA <i>(session 3 of 3)</i>	21 Windows Advanced <i>(Deploying and Managing Networks 7pm)</i> Wyndham <i>(Multimedia 7.30pm)</i> Programming MS Excel with VBA <i>(session 2 of 2)</i>	22 Video Production <i>(Pinnacle 9.30am)</i> West <i>(7pm - 9.30pm)</i> Introduction to MS Access <i>(session 1 of 2)</i> Joomla <i>(session 1 of 2)</i>	23 WMAF Group <i>(7.30pm - 9.30pm)</i> Sunbury Daytime <i>(Maintenance 9.30am. Meeting also held on a 5th Thursday)</i> Linux <i>(session 2 of 2)</i>	24 Retired and Interested Persons <i>(known as Ripper 10am)</i> Casey Workshop <i>(Hampton Park 1pm - 3pm)</i> Essendon <i>(Check website for meeting details. 9.30am)</i>	25 Video Editing
26	27 Peninsula <i>(New Users 4pm Searching your computer)</i> Advanced MS Excel <i>(session 1 of 2)</i>	28 Programming <i>(6.30pm - 9pm)</i> North East <i>(Evening 7.30pm - 9.30pm)</i> Yarra Ranges <i>(Meeting 9.15am Workshop 11.30am)</i> Advanced MS Word <i>(session 1 of 2)</i>	29 Introduction to MS Access <i>(session 2 of 2)</i> Joomla <i>(session 2 of 2)</i>	<div> Colour Codes Black: SIG meetings held at Moorabbin. Blue: SIG meetings held at other locations. Red: Melb PC training courses. Yellow Box: No SIG meeting. </div> <p>Full details of "Special Interest Group" activities, meeting times and training course information in the magazine.</p>		

MELBOURNE PC USER GROUP MONTHLY

MEETING WEDNESDAY FEBRUARY 1, 2012 AT 7:00 PM

MelbPC Headquarters, 479 Warrigal Road, Moorabbin.
(Corner Cochranes Rd)

Melbourne PC User Group
Monthly Meeting
Wednesday February 1,
2012 at 7:00 pm

Random Access

Of course we always start with your chance to talk – and ask the questions about the problems your computers have been giving you all month! Write them down and bring them in so you can ask our experts **Barry Martin** and your fellow members, in the **Random Access** segment.

As always brilliant Prizes will be given away after the break, in our raffle.

WAFFLE SIG

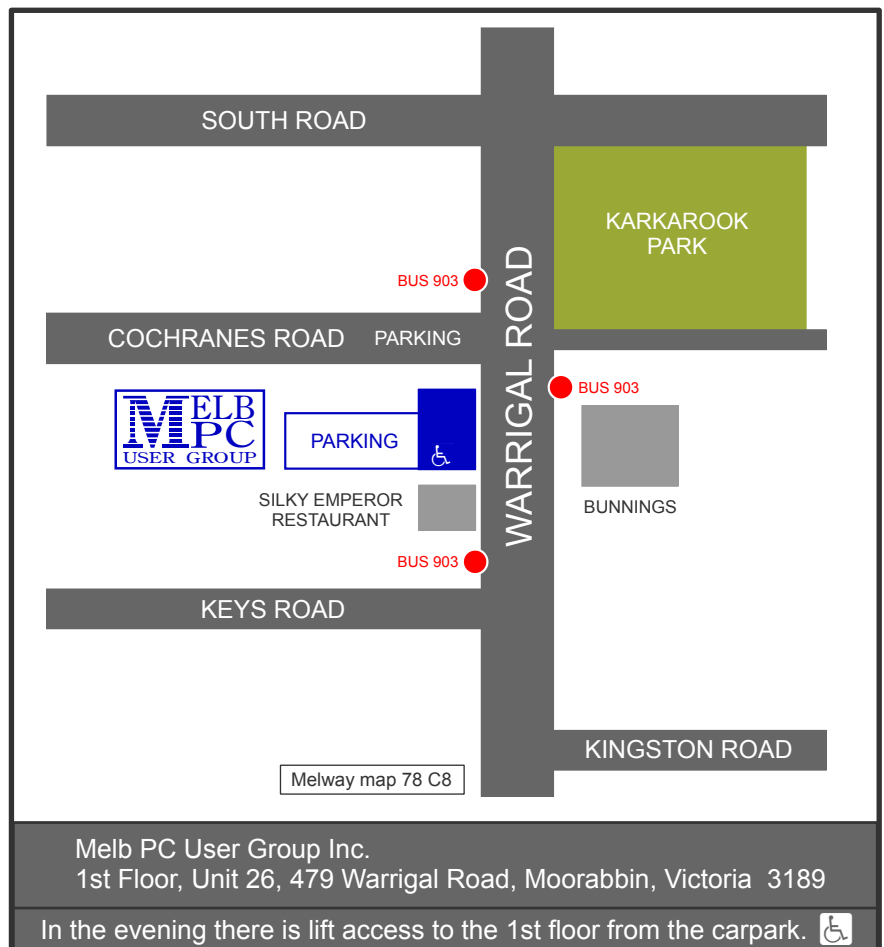
Following the meeting, the "WAFFLE"

(Wine And Fine Food Event)

- ie supper, at a budget cost, BYO (wine) or buy, will be at **La PORCHETTA**, 1017 Centre Rd, just west of Warrigal Rd, next to Red Rooster & the Car Wash. Melway map78/D2. *[Note change of venue].* Patrons are welcome for coffee only. Plenty of car parking. How-to-get-there sketch maps will be available at the meeting.

...
NOTE:

*CHECK THE MELB PC WEBSITE
FOR THE LATEST INFORMATION*



www.melbpc.org.au

A HISTORY OF MELB PC

Article by Lloyd BORRETT – THE FOUNDER

While enjoying dinner in the Sciences Club at Clunies Ross House after the September meeting I had a dig at David Jilts, our revered editor, for getting a historical fact about Melb PC wrong in the magazine. In the manner of any true editor he responded by saying, "Well why don't you write it up for the magazine." And as this month is the fourth birthday of Melb PC I thought it just might be worth while.

THE BEGINNING

Back in 1983 I was working as BHP's only full-time PC Specialist at their head office in Melbourne. I was also writing the "Your IBM Computer" column for "Your Computer" magazine. In one of the columns I put forward the idea of a user group for PC users. At the time none existed. There were user groups for Apple, CP/M, Commodore, etc... users, but these seemed to be all aimed at hobbyist users. The market for PC/MS-DOS PCs was almost all corporate, government and education. Such people were unlikely to be attracted to the existing user groups. I had been a President of the Data General User Group and felt that a group based on similar principles would be appropriate for PC users.

Well the response was such that I started to plan for a first meeting. Computer Power, then an IBM PC dealer, offered the meeting room in their St Kilda Road offices as a venue and we held the first meeting in November 1983.

Some forty people showed up, which was excellent considering the limited publicity the meeting had. I can remember giving a very nervous presentation about the work I was doing at BHP. Then we got down to the serious business of appointing a three person working committee to get a group going.

Christopher Leptos, Robert Taylor and yours truly were it. We started to organise a second meeting for February 1984. Chris was able to obtain the use of the meeting room at IBM's Sturt Street premises. He also achieved much better publicity of the event.

Two days before the meeting IBM tried to withdraw the offer of their meeting room! Some of the IBM mainframe and mini computer related groups had complained. Apparently they didn't have use of IBM's facilities and felt we shouldn't be given special treatment: They conveniently forgot that their groups met during the day when IBM's facilities were used for other purposes. Fortunately, Chris managed to convince IBM to keep its commitment to us.



ARTICLE by Lloyd BORRETT

Approximately 150 people turned up for the meeting. Standing room only. The presentations were about networks and mainframe communications. Heavy! We elected a full committee of: President Vice President Secretary Assistant Secretary Treasurer Publicity Officer Editor Lloyd Borrett (BHP) Christopher Leptos (PKF) Stephen Wagen (PKF) John Rundle (BHP) Martin Nicholson (DDP) Robert Taylor (WM&S) Terry Adair

PUBIC DOMAIN SOFTWARE

I had a collection of 40 public domain software diskettes from the PC/Blue collection which I handed over to the group. That together with the names of some contacts at other groups in the USA became the basis of our current software collection.

David Jitts took on the role of software librarian, a role he was to continue in brilliant style until handing over to the current librarian, Leon Cohen, some years later. Back then there was no way we could convince David that the librarian should take a place on the committee. How times have changed, for David has since become a valuable committee member.

A MAGAZINE

Christopher Leptos arranged for us to have the assistance of Teksetgraphics to typeset our magazine, and Terry Adair and myself got stuck into producing it. The first edition, all 12 pages of it, came out in March 1984. We were the first user group in Australia to have a professionally typeset magazine!

Unfortunately for this first edition and many subsequent ones, most by-lines read "By Lloyd Borrett". It has never been easy to get people to write for the magazine. But in spite of that I think it was an acceptable first effort.

We had blatantly ripped off cartoons from other magazines in an effort to tart it up a bit. And we had hunted high and low to find a few humorous items. I had also placed little quotations in appropriate places. (Perhaps David Jitts could consider reinstating this practise. I think it added a lot of character to the publication.)

Chris Leptos also arranged for the group to become an affiliate of the Australian Computer Society. This gave us access to Clunies Ross House at reasonable rates and this is where our third, and all subsequent meetings, were held.

CONTROVERSY

Our third meeting was perhaps the most controversial we have ever had. At the time copyright was a major issue in the computer world. Our guest speaker was Albert Langer who had some very radical proposals on copyright protection and the place of computer-based technology in Australian society.

Few, if any, on the committee agreed with these views but we all agreed that providing a forum for such a debate was a valid role for Melb PC. In fact the intolerance of the computer industry to user groups and the fact that we held this meeting probably did Melb PC some harm.

At the time users groups were seen as a forum for hobbyists and hackers. Another PC related group had been formed. Their meetings consisted of about 10-15 people bringing their systems along to the meeting and spending the night copying proprietary software. All user groups were being portrayed by our "ever accurate" media interests in this light.

ARTICLE by Lloyd BORRETT

Robert Taylor had all but ceased to be involved with Melb PC as he was heavily involved in getting the Lotus 1-2-3 User Association up and running. MelbPC and the Lotus groups were probably the only groups at the time actively trying to create a more professional image for microcomputer user groups.

SPECIAL INTEREST GROUPS

Melb PC actively tried to get various SIGs started right from the beginning. We believed that they would be the vehicle to keep the group responsive and relevant as it grew. A main monthly meeting and a magazine was but a fine basis on which to build. By forming a SIG when enough members showed interest in a particular topic we could not only provide a better service to our existing members, but also attract many new members.

However it's people that make such things happen and in some cases these people didn't want to be associated with Melb PC. So other separate groups formed. Since then some of these groups, such as the Turbo Pascal Group, have merged with Melb PC. Some have disbanded. Still others continue to this day.

CONTINUED GROWTH

In July 1984 Melb PC had its first stand at a computer show. PC'84 was held at the World Trade Centre and we manned a stand with enthusiastic volunteers. Chris Leptos and myself were able to get various computer companies to provide us with furniture and systems. I had just started up the PC Connection BBS which was then freely accessible to anyone who dialled up, so we demonstrated the system on the stand.

Perhaps the greatest find of the show was Ian Mintern from Hamilton. Ian came down from the country to visit the show and someone convinced him to join the group. They also convinced him to help man the stand. He took to the role of recruiting new members like a duck to water.

I will never forget the moment when Ian met a fellow PC user from Hamilton on the last day of the show. They got together in a corner of the stand and started to organise a Hamilton Branch of Melb PC. Since then Ian has showed up at almost every show Melb PC has been involved in. Always keen to help and brilliant at convincing others of the groups benefits.

The show saw a significant increase in our membership. And in August 1984, as President of Melb PC, I was invited by IBM to attend the official opening of their Wangaratta plant. Recognition at last!

UNITED WE STAND...

It is sad that we were unable to convince the Lotus 1-2-3 User Group to form as a SIG of Melb PC instead of as a separate organisation. And when Les Bell started the dBASE User Group I tried to convince him that it should be a SIG of Melb PC. Apparently most of the people attending the dBASE meetings were CP/M users and very anti the increasingly dominant PC/MSDOS marketplace.

However Melb PC was taking an active role in trying to assist other groups interstate to get up and going. Believing that similar groups around Australia should share appropriate resources, such as a combined magazine and a public domain software collection, we formed the Australian PC User Association.

ARTICLE by Lloyd BORRETT – THE FOUNDER

The idea was to set up a central public domain librarian responsible for sourcing software from all contacts and seeing that the librarian of each affiliated group was kept up-to-date. It would be each individual groups responsibility to decide how to best provide access to the library to its members.

PC UPDATE IS BORN

Aust-PC would also produce a national newsletter to be distributed to the members of all affiliated groups. In September 1984, the Melb PC magazine was renamed to PC Update, and it became an Aust-PC publication. Rod Thompson had taken on the role of editor - arguably the best we've had to date. Copies of PC Update were sent to the then forming Perth and Sydney user groups.

We had lost the use of Teksetgraphics' typesetting facilities, but Rod quickly came up with a new format for the magazine. First the articles were printed using a 15 pitch daisywheel on a letter quality printer. Then a photocopier was used to reduce the subsequent galleys even further. Rod would then paste the magazine together on layout boards ready for the printer.

Although Rod was totally new to all of this he did a magnificent job, spending up to 60 hours a month producing the magazine. (David Jitts probably doesn't realize how easy our magazine production is today, in comparison.)

CHANGES AT THE HELM

In February 1985, because of changed work commitments Chris Leptos, Stephen Wagen, John Rundle and myself all resigned from the committee. Thus the committee lost four key members in one hit and had to look around for new blood.

Felix Hofmann took on the role of President. Mike Hosking became Vice President (or President of Vice, as he always put it). Tim O'Connor became Secretary, and Joe De Simone became Publicity Officer. As it turned out I needn't have resigned and continued to serve on the committee as the Past President.

Then in March 1985, just as the new committee was starting to get organised, Rod Thompson announced he was going to have to step down as Editor in April.

VOLUNTEERS GET MORE THAN THEY GIVE

By July 1985, David Watson had taken on the role of editor. Because he was unable to devote the amount of time that seemed necessary to produce the magazine, David tried to get a Newsletter SIG going. This was never as quite as successful as planned but the magazine continued to be produced on time and be improved.

I remember well the paste-up sessions that would take place each month. A group of people, mostly committee members, would gather to paste-up the magazine. My favourite role was doing the fiddly little bits (like Slartibartfast) putting the page numbers and magazine name at the bottom of each page.

Later in the month a similar group, often the same people, would gather and stuff magazines into plastic bags, seal them, label them, and then make sure they were correctly bundled for Australia Post. During such sessions interesting discussions would frequently start. I think we shared more of our experiences and learnt more about PCs at these sessions than at any of the other Melb PC activities.

ARTICLE by Lloyd BORRETT

There have been many people who have contributed by performing numerous similar tasks during the history of Melb PC. And yet every single one I ever questioned, always believed that he or she received a lot more than they ever contributed.

MOVING ON...

At the AGM in July 1985 a new committee was elected:

President Vice President Secretary Assistant Secretary Treasurer Meetings Coordinator Publicity Officer Senior Editor Past President

Lloyd Borrett Mike Hosking Tim O'Connor Loi Sin Choi Joe De Simone

Gary Bryant Ian Robinson David Watson Felix Hofmann

We had five SIGs. David Jitts was still the Group Librarian and there were some 200 disks in the collection.

The PC Update magazine was typically 44 pages long. Much of the material was being sourced via exchanges with USA user groups such as Capital PC and the Boston Computer Society. We never seemed to be able to get enough Melb PC members to contribute their experiences, reviews, and ideas.

The group was getting big, and the administration workload was often becoming too much for the too few left with the task. This situation was to get a lot worse before it got better.

AUST-PC FAILS

Aust-PC was formed the idea was that all groups affiliated to it would solicit advertising for the magazine and thus cover production costs. Each group would contribute articles and news items to the national publication. Affiliated groups were still free to produce their own newsletter, and they were responsible for distribution of PC Update to their own members.

Naturally until advertising could cover costs we had to charge for the magazine. So we passed on the \$1.00 per copy charge to these other groups. Unfortunately our efforts at co-operation weren't returned.

In Melbourne we regarded the magazine as a part of the membership subscription. Sydney were charging the same fee for membership but selling the magazine to members who turned up at meetings at a significant profit! Sydney members who couldn't attend meetings or wouldn't pay for it, didn't get the magazine.

The Sydney committee were unwilling to contribute any advertising revenue or articles towards the magazine. When we pointed out that significant numbers of NSW people were joining Melb PC simply for access to PC Update, the Sydney committee responded with a proposal that we introduce a special subscription rate for PC Update that would apply to members of the Sydney group.

With attitudes like these prevailing, PC Update went back to being a publication of Melb PC and Aust-PC was disbanded. This perhaps explains why future Melb PC committees have been less than enthusiastic at subsequent proposals of co-operation from the Sydney group.

One day perhaps we will see a national body created and thus achieve greater interaction and co-operation between all groups. Certainly they would all become better because of it.

ARTICLE by Lloyd BORRETT – THE FOUNDER

ANOTHER SHOW

Melbourne hosted the Pan Pacific show in September 1985. Melb PC didn't intend to man a stand at the show, but after the show had been running a few days the organisers approached us. There were a few spare stands and they asked us if we could man one.

Joe De Simone did a magnificent job of getting furniture and computers for the stand from numerous companies who had displays at the show. David Watson and Anne Rouse did a fantastic job at short notice in arranging for leaflets to be available. Liz Klar showed up to help man the stand together with the above people. And then just as we were about to get going Ian Mintern showed up!

For two days this team did a great job fielding questions and handing out promotional material. We even met a number of members from the Capital PC User Group and the Boston Computer Society, two U.S. groups we have close contacts with.

The membership numbers underwent yet another rapid increase.

TRAINING GETS OFF THE GROUND

Towards the end of 1985 we finally started to get some organised training sessions being run by Melb PC. Gary Bryant, Anne Rouse, Tim O'Connor and Tom Coleman all played significant roles in establishing this service.

The level of activity in the running of training courses has varied substantially in the last two years. For quite a while most of the burden sat firmly on the shoulders of Tom Coleman and Gordon Castle.

As always, it comes down to having the people prepared to but in the time. You would think that with membership numbers growing rapidly, more people would be available to improve existing services and introduce new ones. And yet the number of active volunteers within the group has remained fairly constant.

MEMBERSHIP CONTINUES TO INCREASE

The huge increase in membership between mid '85 and mid '86 started to put a lot of pressure on the volunteers involved with providing the groups services. Some dropped out and others stepped in, but overall the actual number of active volunteers remained fairly constant.

However members came from everywhere to set up and man the stand at PC'86. (Ian Mintern maintained tradition by showing showing up yet again.) This show alone saw membership increase by 400 in just two months. The June '86 monthly meeting saw us fill the room at Clunies Ross House for the first time. Standing room only with some 350 people packed in.

At this time the Turbo Pascal Group joined forces with Melb PC.

CRISIS POINT

We were perhaps being a bit too ambitious in the rush to introduce new services. Certainly I thought more volunteers would come forward to help provide these services.

But the result was severe overload on the existing volunteers. And many functions, especially the overall administration of the group, was suffering badly. We seemed to be doing well financially, but the records were a mess and no serious attempt at budgeting and forward planning was happening.

ARTICLE by Lloyd BORRETT

By the middle of 1986 the strain was starting to show. Under ever increasing pressure to keep things going those actively involved with the running of Melb PC were starting to come apart at the seams.

One of the biggest problems during the period '85-'86 was that a number of people took up "positions" within the group, but didn't actually carry out the actual functions of the position. And the active volunteers were not prepared to call a slacker a slacker, force the issue, and if necessary get rid of the inactive volunteer and attempt to recruit someone else.

In the lead up to the July '86 AGM and elections, the active volunteers tried to work out an acceptable basis on which the group could be organised and services be maintained. With this largely in place I was persuaded to continue as President. However at the AGM it all started to unravel, and I felt compelled to resign and let someone else take over.

This seemed to shock many members, most of whom would have been totally unaware of the strain being placed on those actively involved in running Melb PC.

TURBULENT TIMES

The committee after the July 1986 AGM was: President Vice President Secretary
Treasurer Committee Members

Anne Rouse Joe De Simone Liz Klar John Swale Alan Barkauskas John Beck
Gordon Castle Leon Cohen Tom Coleman

Little happened to relieve the strain on active volunteers, and it started to show as services began to suffer. The volunteers seemed to split into three camps. Two camps took up opposing positions. Nothing the other camp would do was right. The third camp desperately tried to resolve the conflicts without taking sides.

It all came to a head some three months later. One camp had effectively frozen the assets and funds of the group. The other was trying to carry on as if nothing was happening, manoeuvring to gain control of the committee. Things were not looking good.

I had become a rather inactive member of the group by now, starting to concentrate on my professional career for a change. Eventually members of the "neutral" camp approached me, and asked for my assistance in resolving the differences. A Special General Meeting was held in November and new elections were held. Prior to the meeting agreement was reached that members of the two opposing camps would not seek re-election.

I had reluctantly agreed to serve again as President, but when Ron Lyth stepped forward prepared to take on the task, I happily stepped aside.

The committee elected was: President Vice President Secretary Assistant secretary Treasurer
Publicity Officer Senior Editor Past President

Ron Lyth John Beck David Owen Leon Cohen Alan Barkauskas Gordon Castle
David Jitts Felix Hofmann

David Jitts had stepped up to take on the formidable job of editing PC Update magazine. And this time he finally became a committee member.

REBUILDING

Some changes to that line-up have happened since then, notably John Drake taking on the position of Treasurer in March 1987. John Drake and David Owen have done a magnificent job in the many months since in getting the administration of Melb PC up to the highest standard it has ever been.

ARTICLE by Lloyd BORRETT – THE FOUNDER

And if you knew the mess it was in you'd appreciate it even more. A huge backlog of work had to be cleared up. And at the same time the group was going through its highest growth phase ever!

BETTER THAN EVER

David Jitts assisted, by John Wilkins, has taken our magazine into yet another new era. Somehow the members have found inspiration and are contributing great material. We are now making full use of the power available to use by desktop publishing tools. Dudley Horque has done a great job adding a touch of humour with his cartoons. John Swale has made sure the magazine is distributed properly and efficiently to all members.

Leon Cohen and John Beck have kept the public domain collection growing at an ever increasing rate. The collection is now HUGE, and must surely be the largest in Australia.

New volunteers have stepped forward from time to time to start new services, form new SIGs, run training courses, and fill vacancies.

Gordon Castle has been brilliant at organising training courses. He has gained permission for the group to use the facilities at RMIT, and has run many of the courses himself.

Charles Sandercock and Colin Macauley have done a great job in establishing and maintaining the Melb PC bulletin board. It's arguably the most popular and best in Australia.

We have seen the creation of the DBMS SIG (Ray Watson), the Desktop Publishing SIG (John Wilkins and Roger de Salis), the Tech SIG (Patrick Kearney), and the Hardware SIG (Wayne Coutts and Felix Hofmann). And then there are the regional SIGs, Geelong (Alan Edwards) and Bendigo (Frank Bourke). We now even have "THE MANIFESTO" proposed by David Jitts, and later modified and adopted by the Committee. The stand at the PC'87 show saw yet another huge increase in members. Will it ever stop? I doubt it!

THE FUTURE

As we celebrate the fourth birthday of Melb PC and look back over its history we find it is in better shape than ever. A working administration. More services than ever before.

There are so many exciting things which have happened over the last four years within Melb PC that it would be impossible to tell you about all of them. (Though by the length of this article it must seem I have!) But remember, none of it would have been possible without the contributions of you and your fellow members.

This "brief" history has highlighted some of the names of people who played major roles in Melb PC. Some are still with us, some have moved on to other things. It's the efforts of these people who have been significant in making Melb PC what it is today. We should thank them all.

I've been the President of Melb PC or on committee for most of its life, but there were many times when the spirit was not there. Things start to get a little difficult and the hurdles seem larger than ever. Amazingly, just as the gloom sets in, along comes someone new who is prepared to throw themselves into the fray.

Someone who was merely out there in the membership responds by taking responsibility and carrying it through. Contributing some of their own time to help others and, in doing so, themselves. Suddenly everything sorts itself out and we all feed off the injection of new energy.

Four years old, and more successful than ever. But we are not stopping there.

ARTICLE by Lloyd BORRETT

There are ambitious plans for the coming year. A group headquarters, a paid administrator, expansion of existing services, and new services to be nurtured. Our fifth year should be better than ever.

But remember its your financial support and your help that makes it all happen. Those you have come forward to help in the past have all benefited from the opportunity to test their talents. I'm sure that those who come forward in the future will also find it a positive and worthwhile experience. After all, isn't that the real purpose of a user group.

Happy fourth birthday Melb PC.

Reprinted from the November 1987 issue of PC Update, the magazine of Melbourne PC User Group, Australia



HONORARY LIFE MEMBERS

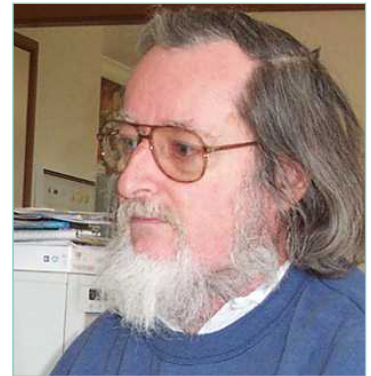
Lloyd Borrett	1986	Noel Peters	2003
Giuseppe De Simone	1992	Tom Coleman	2004
George Skarbek	1992	Bill Ford	2005
Douglas Brooke	1994	Geoff Hicks	2005
Barry McMenomy	1996	Ian Rankin	2006
Ash Nallawalla	1996	John Hall	2007
Peter Smith	1996	Dave Botherway	2009
Gary Taig	1996	William Dair	2010
Bruce Elliott	1997	Ray Beatty	2010
Charles Wright	1997		
Stephen Davey	1999		
Stan Johnstone	1999		
John Swale	1999		
John Morris	2000		
Richard Solly	2000		
Kenneth Thomas	2000		
David Webster	2001		
Glenn Webster	2001		
Ian Webster	2001		
Yvonne Webster	2001		
Philip Lew	2003		

FATHER OF THE PC

Article by *GORDON WOOLF*

FATHER OF THE PC DIES AT 90

Gordon Woolf tells of the life of a man who had an influence on all we do, but you may not even have heard of him



Jack Goldman was a man you probably have never heard of but he was responsible for the way most of us use our computer.

Dr Jacob Goldman died in December in Stamford, Connecticut, aged 90. and he was in many senses the **"Father of the PC"**. He was born in Brooklyn on July 18, 1921, son of a migrant family... both parents came to the USA from Russia.

When he joined Xerox as chief scientist in 1967 he was successful in proposing that they set up a research centre.

His logic was that there was much talk at the time of the "paperless office" and that Xerox made most of its income from the commission it earned from every piece of paper that went through its leased office copiers. Any thought of an office without paper was a threat to that income. Therefore, Goldman suggested that Xerox needed to "establish scientific preeminence" in developing computer technology.

Unfortunately while the unit he set up, the Palo Alto Research Center, better known just as PARC, succeeded in doing that, he had no luck in persuading Xerox to go ahead with what was developed. The one exception was the laser printer, which they licensed to Hewlett Packard. As blogger Bill Blinn wrote on Christmas Day: "The suspicion about distant developers and their toys continued to plague PARC. As fast as PARC could develop new devices, Xerox's bureaucracy jumped into action and quashed them."

Xerox did not see the value of the mouse, the desktop computer, and the graphical user interface which later became the face of Mac and Windows. One project was to attempt to fit all the components of a computer into something the size of "a pizza box" (this at a time when computers were only just coming down from room size). Also developed at PARC was ethernet which in a joint move with Intel and DEC was released to the world based on a very small license fee -- and in 1979 they demonstrated the first 3D computer graphics chip.

Earlier, in 1973, a group of engineers called a small group of interested people to see the world's first "personal" computer, an idea which was compared by the press to the ridiculous idea of giving each airline passenger an individual plane. Writer Michael Hiltzic points out that at the time, Bill Gates was a freshman at Harvard and Steve Jobs was travelling in India seeking his personal zen. IBM were intent on electric typewriters.

Xerox dropped the idea of developing the Alto computer in August 1977, four years before IBM unveiled the PC and six years before Apple launched the Lisa, forerunner of the Mac.

ARTICLE by Gordon Woolf

However, the people he employed and who developed many of those aspects of modern computing did go on to work elsewhere, or for themselves. And others who were shown around also saw what could come of what was developed. Michael Hiltzik, author of "Dealers of Lightning" which described the part PARC played in "the dawn of the computer age" wrote that those at PARC saw Goldman as the father, the person at Xerox HQ who was on their side -- often the only person at Xerox HQ who was.

Among those who came, saw and went on to conquer were Steve Jobs and Bill Gates who saw the PARC demonstration of icons and pop-up menus in February 1975 while those who left in order to develop their projects were Charles Getschke and John Warnock who founded Adobe based on their development of the Postscript language. Others who left PARC included Alan Kay (to Atari and Disney) and John Elenby who founded Grid, a leader in early laptops.

Before his role as chief scientist at Xerox, Goldman held a similar role at the Ford Motor Company, where he was instrumental in the 1950s in the early stages of ideas for an electric car, principally in sodium-sulphide battery development. Before that Goldman had been at Bell Labs where he played a role in developing the transistor.

So, when you next use your PC, whatever the operating system, spare a thought for the person who, while he may not have invented any of the technology you use, did ensure that the people who did had the facilities to do so, and, when their company did not want their products, ensured that when they went elsewhere, or the developments were seen and "reinvented" by others. they were not mired in legal actions.

Sources for information includes:

Los Angeles Times story at

<http://t.co/TfuilUrt>

Dealers of Lightning by Michael Hiltzik at

<http://www.amazon.com/gp/reader/0887309895>

Bill Blinn's Techbyter Worldwide blog item:

<http://www.techbyter.com/2011/1225.html>

Obituary by Scott Fulton on ReadWriteWeb:

<http://tinyurl.com/7e4ennj>

Jacob 'Jack' Goldman



ULTRABOOKS ARE THE NEXT BIG THING!

Article by ADAM TURNER



ULTRABOOKS are the Next Big Thing in mobile computing, combining the grunt of a notebook with the petite design of a netbook.

Tiny netbooks were all the rage a few years ago. They're cheap and light, but ask you to sacrifice much in the way of features and performance. The tablet revival took the spotlight away from netbooks, but now PC makers are striking back.

The new range of ultrabooks offer the grunt of a fully-fledged Windows notebook, while embracing the lightweight design of tiny netbooks. They're following in the footsteps of Apple's super-thin MacBook Air. Ultrabooks tend to be less than 20mm thick and weigh in at under 1.5kg, often opting for an solid state drive with no moving parts to keep down the weight and reduce power consumption. They also ditch the optical drive, but you've the option to buy an external USB-powered DVD burner.

Ultrabooks feature Intel's low-voltage Core i3, i5 or i7 processors, often combined with 4GB of RAM. It's a combination designed to offer plenty of grunt while pushing the battery life out past 5 hours. One of the key selling points is how quickly an ultrabook can awaken from sleep when you flip up the screen. Even some of the hard disk drive models include 20GB of solid state storage, which lets them revive quickly if they're hibernated rather than merely suspended to RAM.

The first ultrabooks to hit Australian shores include the Toshiba Satellite Z830, Asus Zenbook and Acer Aspire S3. Each is available in several models and prices range from \$999 to \$1999, which makes them more expensive than a tablet but still cheaper than many of the ultra-thin notebooks of the past.

All of these new ultrabooks feature built-in wi-fi, but some forgo the Ethernet port for connecting to the internet via cable. Many also forgo a VGA output for connecting to a monitor, but you'll often find an HDMI or mini-HDMI port in its place. A couple of USB ports are standard, and maybe an SD card slot, with some ultrabooks opting for fast USB3.0 connections.

ARTICLE by ADAM TURNER

Ultrabooks utilise 11.6 or 13.3-inch displays, striking a better balance between portability and usability than a 10-inch netbook. The bright, crisp LED displays generally offer 1366x768 resolution but sometimes boost it to 1600x900. The use of high gloss displays is frustrating for those who want to use their ultrabook outside.

Unfortunately the trade-off for a mid-sized display is a mid-sized keyboard which can feel a little cramped compared to the typical desktop keyboard. The super-thin design of ultrabooks can also impact on the feel of the keyboard, as the keys can't travel as far when pressed.

Of the ultrabooks available in Australia, the 13.3-inch Acer Aspire S3 has the best keyboard and trackpad. The Toshiba Satellite Z830's squat keys create an unnecessarily cramped keyboard which doesn't make the most of the available space. The Asus Zenbook has a larger keyboard but can be fussy when it comes to registering key presses. If you start typing quickly the Zenbook is less likely than most notebooks to acknowledge a keystroke which hits the edge of the key rather than the middle. The Zenbook's trackpad is also overly fussy when it comes to defining the edges of the virtual left and right buttons.



Keep in mind that at these prices you're paying a significant premium for portability and style, considering you can find plenty of standard 15-inch notebooks with similar features for under \$700. At these prices ultrabooks are primarily targeted at people on the go.

HIRE OR BUY - IMATION SUPERDISK DRIVE

I am keen to hire or buy the above and was seeking your advice on advertising in the monthly magazine. I have some old disks that I am hoping to put on a hard drive etc but cannot do so because my machine has ceased to function and they are no longer available. I am hoping that a member has one that would be available on some basis.

Neil Bell (member no 45938)

79 Cliff Street

St Leonards Vic 3223

ph 03 5257 3552 mob 0419 037 147

SUICIDE PREVENTION SOFTWARE – ANYONE?

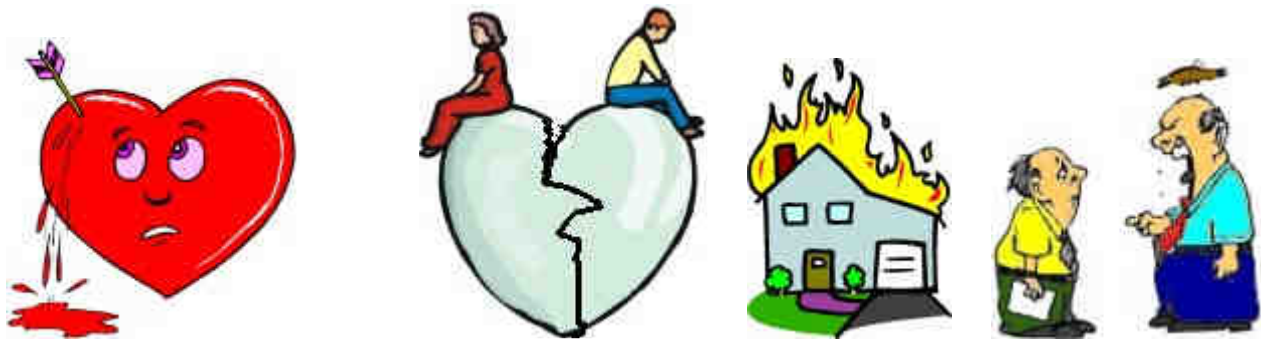
Article by **PATRICK BRENNAN**

Can a piece of software stop you from killing yourself? I hope so, because that's its aim.

COUNSELLORS WITH A COMPLAINT

A few years ago, I held a position that involved a counselling role. This got me involved with a group of fulltime counsellors. The counsellors had a complaint: an ever-growing list of people booked into see them, with no sign of the numbers being reduced in the foreseeable future.

One cause they cited for the growing numbers seeking help, was the lack of basic education and training available to people in the area of soul health. People sometimes arrived for counselling, after the maximum amount of damage has been done to their finances, relationships, emotional and mental health. At the extreme, some clients had actually attempted suicide.



Many questions regarding a first aid course then arose in my mind. What if a first aid course for the soul could be written and taught? Could people minimise the damage if they used it? Would people be able to avoid the slippery slide into the gutter, if they could be taught how to maintain and restore the health of their souls after a soul-crushing event?



I decided I would write a first aid course for the soul based on the 5-step technique the counsellors were using to enable people to find release.

A NEW COURSE

After two years of work, off and on, the course was written. It was submitted to qualified psychologists to check for errors. They found none and wished me well. Then it was dispatched to almost every short course institution in Melbourne.

The result? No takers. 'We don't need another self-help course, thank you.' was a typical reply from such institutions. Often, no reply at all was received from the short course co-ordinators.

YOUR GAIN

Well, their loss is now your gain. You may now download and use the whole course, free of charge for personal use.

ARTICLE by PATRICK BRENNAN

I would like to encourage everyone who reads this article to take the step of downloading the course and of completing the course and the included exercises.

After doing so your eyes will be opened to just how vulnerable you are. More importantly, you will be trained how to react to life's tragedies, abuses and disappointments – in ways that protect and restore the health of your soul, and the souls of others.

READY FOR ADVENTURE?

The course is, in part, an adventure into a part of ourselves that most of us know little about. You will find out what your soul is and how it can be damaged. The consequences of untreated damage are explained as well as the steps to release. Our simple, yet amazing soul damage warning systems are revealed and explored.

Heavy language is avoided throughout. Amusing cartoons are also used to illustrate many points, making the material fun and easy to read.

THE SOUL SOLUTION

To begin your adventure, download The Soul Solution course from my website at:
<http://tinyurl.com/crchuf7>

The software is really just a front-end that launches two PDF files: one: the course notes, and two: the course exercises. The course notes may be read on-screen, or printed if desired.



Please feel free to pass on the page link to others.

FEEDBACK

To leave feedback about your course experience, please use the form at:
<http://members.iinet.net.au/~prefect/soulsolution/feedback.html>

Wishing all Melbourne PC User Group members the best of soul health,

Patrick Brennan,
Trainer.

USING LIVE CDs – PART 1

Article by DAVID HATTON

Live CDs are well known in the Linux community, but may be something of a mystery to Windows and Apple Mac users. In this article, I'll outline some of the history of Live CDs with particular reference to the Knoppix Live CD. I'll also run through how to boot Knoppix on your computer without affecting anything that is stored on the hard drives.

In part 2 next month, we will explore the software included on the Knoppix Live CD/DVD, and show how we can copy files to a safe place from the hard disk of a computer that won't boot.

IN THE BEGINNING - THE BOOTABLE BUSINESS CARD

Around the late 1990s the "Bootable Business Card" (BBC) made its' appearance. (figure 1). This was a business card size CD, which could be booted on most computers at the time, although as the LinuxCare BBC help files observe ..

"While we've had good results with some laptops, they present a number of special challenges that we've chosen to avoid, like non-standard CD-ROMs, USB floppies, and other weird components."

The notes go on to inform users that they will need "16MB or more" (that's Megabytes!) and will be able to ..

- "(a) repair a broken system
- (b) recover a lost system from backup
- (c) save important information to a floppy
- (d) boot any computer as a basic Linux system"



*Figure 1.
Bootable Business Card
circa 1999*

While the early BBCs were "for Linux experts only", most Live CDs today have GUI interfaces and are much easier to use.

THE EARLY DEVELOPMENT OF KNOPPIX.

Around the time of the early BBCs, Klaus Knopper in Germany was finding an increasing interest in his services as a Linux consultant, and was having to lug around computer hardware to demonstrate Linux to interested clients.

He decided that it would be much better to just carry around a bootable CD containing his software and be able to run his demonstrations on his clients' computer. To do this, he further developed the BBC as a demonstration platform for Linux while preserving the data recovery functionality.

ARTICLE *by* DAVID HATTON

The resulting Live CD could be booted and used on most intel-compatible PCs without changing anything on the host computer - a reboot without the Live CD ran with the original software and data unchanged.

Klaus generously made his creation available to others, and the KNOPPIX distribution became very popular as a means of demonstrating Linux and rescuing data from non-booting computers.

MORE RECENT LIVE CD DEVELOPMENTS.

Today, many Linux distributions create a Live CD as a way to check for hardware compatibility and to try out Linux software without changing anything on the hard disk. This is done by the boot sequence creating a RAM disk containing just the essential files required for running programs, and loading any other programs from the CD as needed.

If all is well, an installation can be performed by clicking on the install icon on the desktop. Otherwise, a shutdown and reboot runs the existing software from the hard disk as normal.

OBTAINING AND BOOTING KNOPPIX.

1) Create a Knoppix CD

Download the Knoppix .iso file to a convenient file folder. You will need a reasonably fast internet connection at home, or you can quickly download the CD or DVD .iso file from the MelbPCs' Linux Repository using a computer in the Internet Lounge.

You can then create a CD using the "burn .iso file to CD" option in your favourite CD burning program. This task can be done on your normal Windows or Mac computer.

An alternative to downloading and burning the .iso file is to obtain a MelbPC custom burnt disk - contact the office for details.

2) Check that you can boot from the CD/DVD drive.

Many computers allow you to set a temporary boot device by pressing a function key while booting, and the key used for this is usually displayed as the computer starts up. Otherwise you will need to enter the BIOS and change the boot device order to place the CD/DVD ahead of the hard disk. Refer to your computers' documentation if you are not sure how to do this.

3) First time boot: check the integrity of your Knoppix CD.

Place the Knoppix CD in the CD/DVD drive, and reboot. You will soon see the Knoppix boot screen (figure 2). Quickly press the F2 key, and the first help screen should appear. (figure 3). Type in the following ..

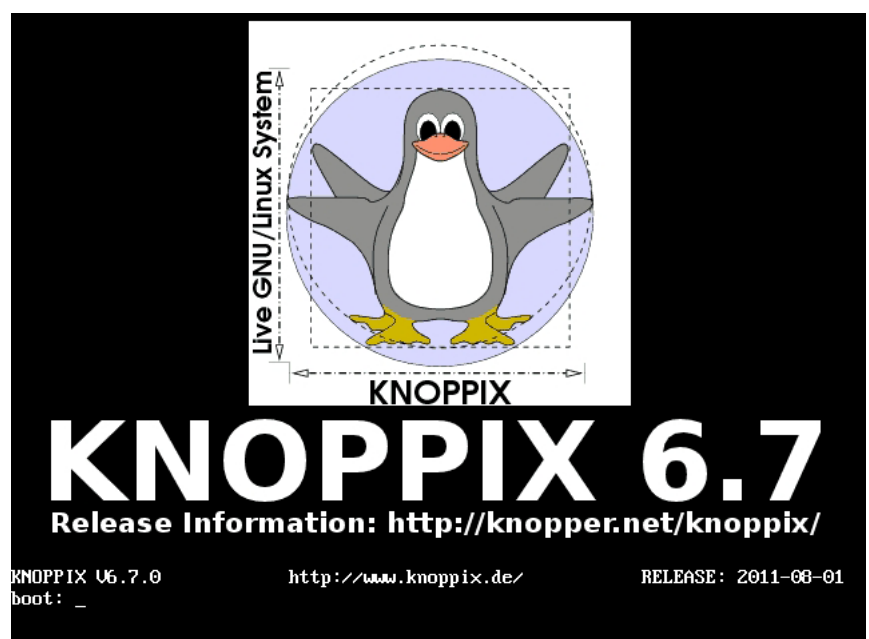


Figure 2.
Knoppix Boot Screen

ARTICLE by DAVID HATTON

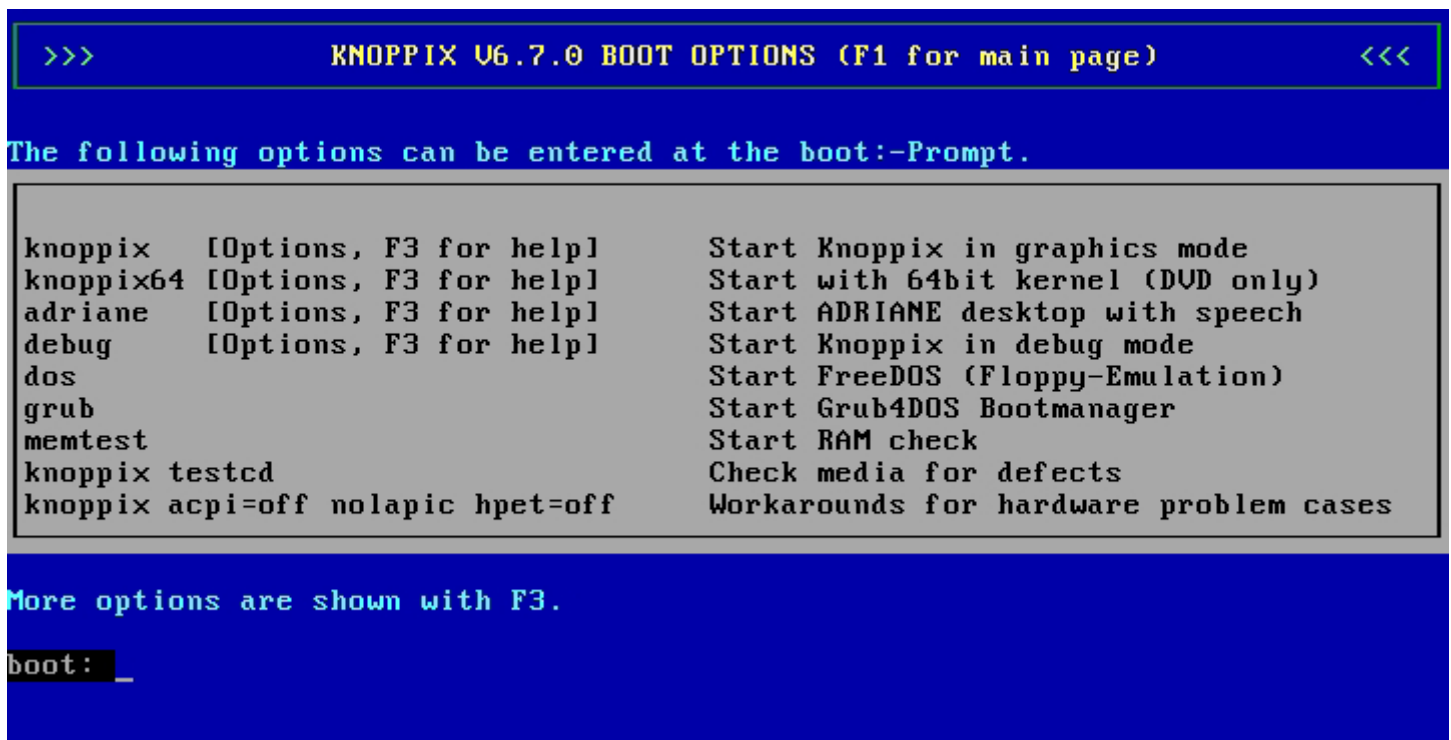


Figure 3.
F2 Boot Options Screen

knoppix testcd

and press Enter. The media check routine will start, and various messages will appear on the screen. Depending on whether you are using the CD or DVD version and the speed of your computer, the media check may take a while.

If the test is successful, the normal Live CD boot will then commence automatically. As Knoppix has to first set up the hardware, and then copy a number of essential files into memory, booting will seem slow compared to a boot from a hard drive.

4) Booting Knoppix normally.

You can also boot Knoppix by simply placing the CD in the drive, rebooting, and allowing the default boot sequence to run.

After a while you will see the Knoppix Desktop (figure 4). If you also see the words "Compiz Fusion" which display and then fade out, Knoppix has determined that your graphics display hardware can cope with the desktop visual effects and has enabled them - see figure 5 for an effect displayed when closing the file manager. Note that these effects can be turned off if they get too annoying! The other notification you will usually see is a popup advising that your internet connection is active.

Figure 4.
Knoppix 6.7 Desktop



ARTICLE by DAVID HATTON

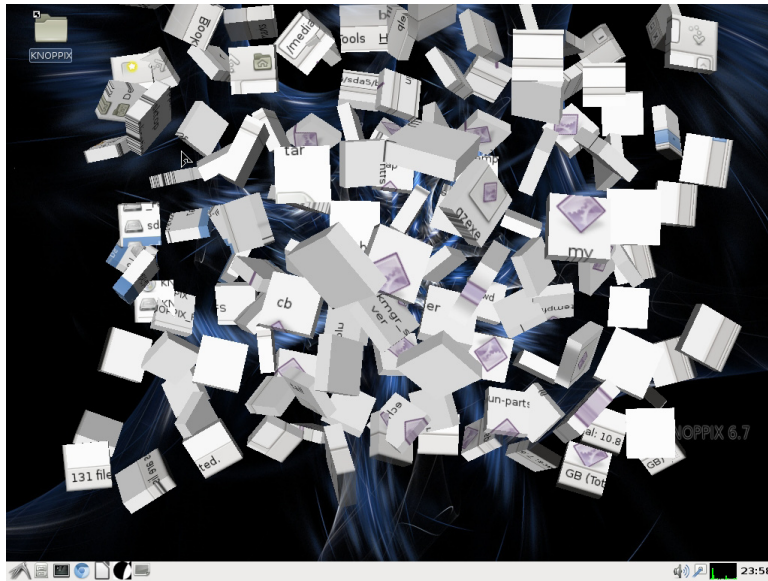


Figure 5.
File Manager Close Window animation

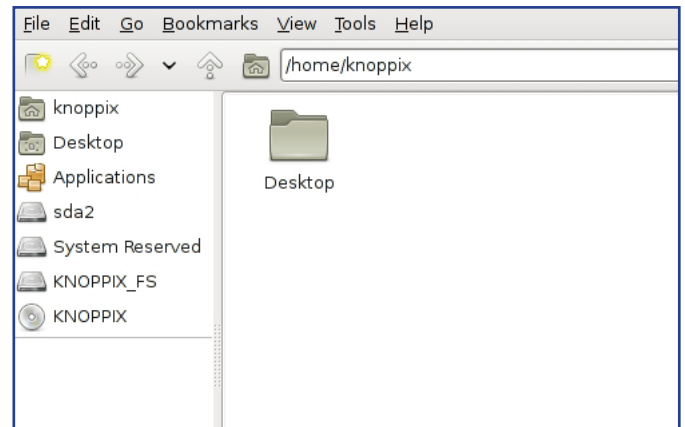


Figure 6.
Knoppix File Manager running on Windows 7 laptop

You can now explore the various items of software installed, and see if all your peripherals are set up correctly. Note that any files you create and want to keep will need to be saved to a USB drive or similar before shutting down.

ACCESSING WINDOWS DISKS FROM LINUX.

Looking at files in a Windows partition is best done using the Knoppix file manager. A typical Windows 7 main partition will look something like the screenshot in figure 6.

Note that the Windows 7 boot partition is shown labelled "System Reserved", and the main Windows 7 partition is labelled "sda2". By default, left-clicking on either of these labels will make the disk accessible and display the contents in the right hand panel of the file manager. (figure 7 shows the contents of a Windows 7 main partition). If you want to prevent writing to this, or any other Windows partition, right-click on the partition label and left-click on "Unmount" (figure 8). This will result in the file list disappearing.

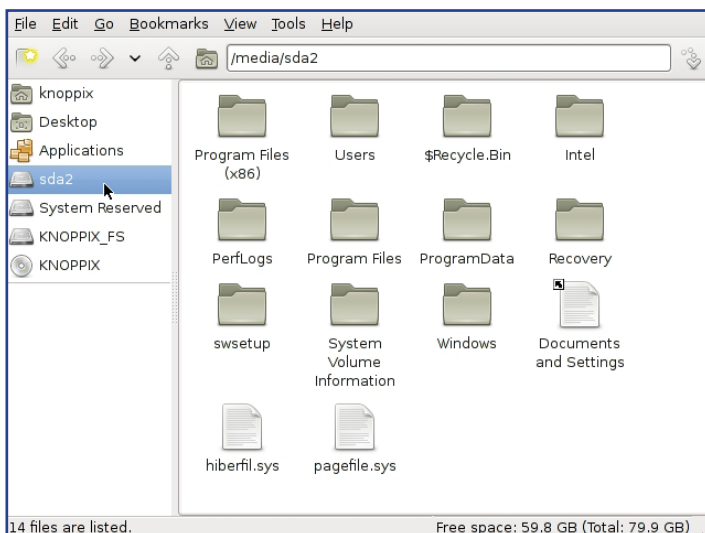


Figure 7.
View of Windows 7 main partition

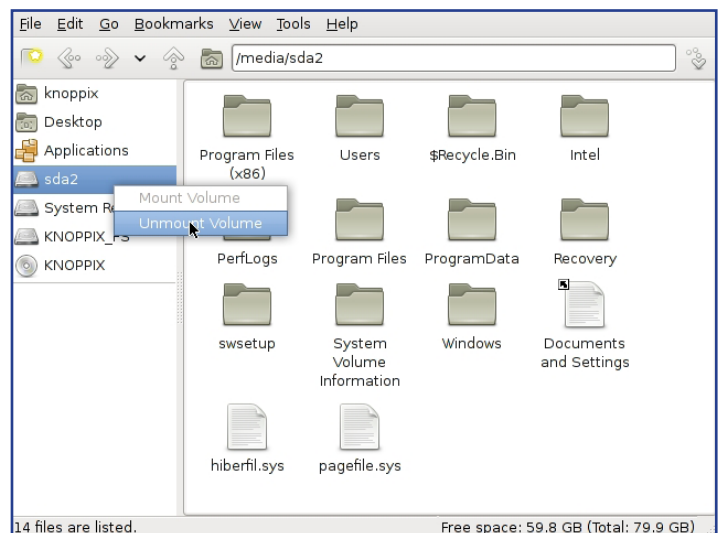


Figure 8.
Click on Unmount to stop access to Windows partition

ARTICLE by DAVID HATTON

IF KNOPPIX WON'T BOOT - USING THE 'CHEATCODES'

There are vast numbers of intel-compatible PCs in use, and some of them have little hardware quirks. While the Knoppix hardware detection scripts will usually work well, some computers have components that don't respond in the way expected. Occasionally this results in Knoppix booting incorrectly or even not booting at all.

In these situations, the list of cheatcodes can get you around the problem. Essentially, you can use the cheatcodes to tell the boot sequence to ignore certain hardware components, or to set hardware characteristics that you know will work.

The complete list of cheatcodes can be found in the file `cheatcodes.txt` on the Knoppix Live CD, which can be read while running Microsoft Windows. (figures 9 and 10)

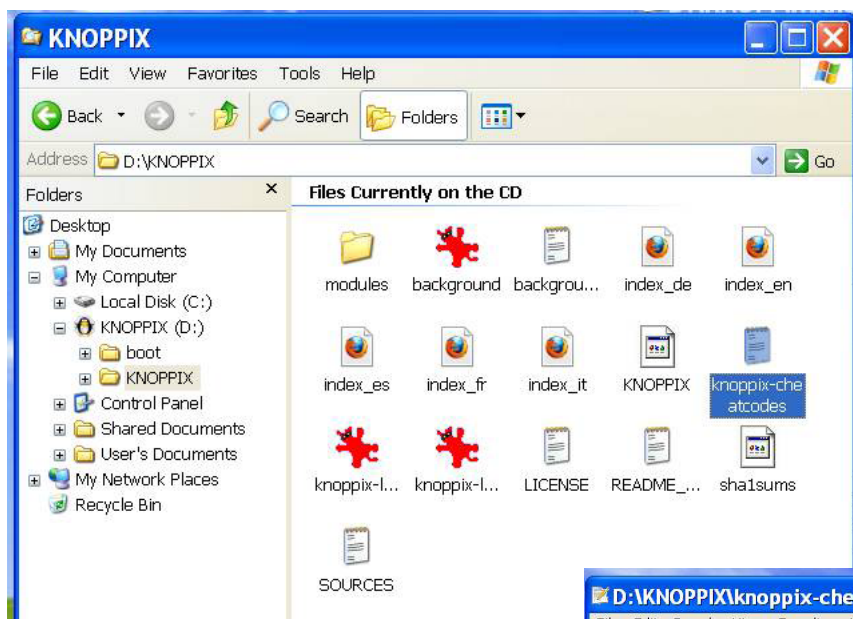


Figure 9.
*knoppix-cheatcodes file viewed in Windows XP
file explorer*

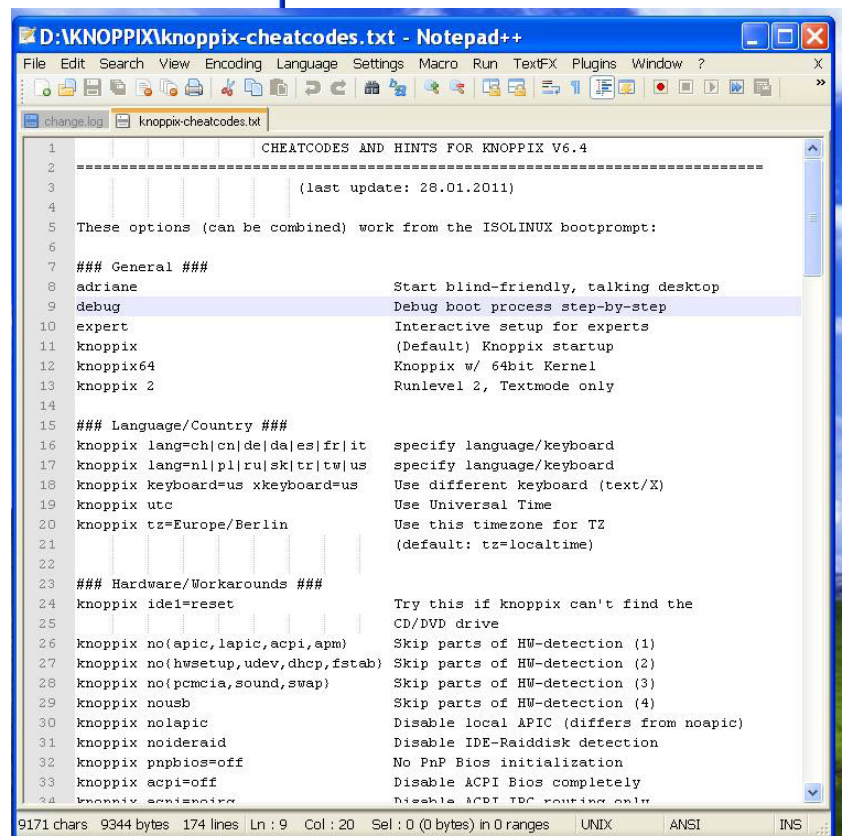


Figure 10.
A part of the knoppix-cheatcodes text file

ARTICLE by DAVID HATTON

For Example -

In preparing this article, I tested a number of machines to check that the Knoppix Live CD would boot correctly. One machine was an ancient IBM T22 Thinkpad laptop. Just pressing the Enter key at the boot prompt gave me the normal startup messages, but left me with a blank screen at the end of the boot sequence. I rebooted by pressing the CTRL/Alt/Del key combination, and pressed F3 as mentioned above.

One of the options shown was to use a cheatcode to specify that my laptop should use a framebuffer for video. Thus I typed

```
fb1024x768
```

at the boot: prompt, pressed Enter, and Voila! - a successful boot with desktop appearing where before all was dark!

Another useful cheatcode entry for old computers is:

```
knoppix acpi=off nolapic hpet=off
```

If you don't want the desktop animation effects, or if your desktop display seems a little unstable, try booting with

```
knoppix no3d
```

typed at the boot: prompt.

Sometimes you may need to experiment a little to choose the right cheatcodes combination to successfully boot, although most reasonably recent computers will boot automatically without problems.

If the computer boots, but has problems displaying the desktop, you can start a reboot by holding down the Ctrl, Alt and F2 keys, which will result in a screen with

```
root@Microknoppix:/#
```

at the top left-hand side of the screen. You can now type

```
reboot
```

and press Enter

Knoppix will then run the shutdown/reboot sequence as normal.

References:

KNOPPIX website - <http://www.knoppix.com/>

Distrowatch knoppix page - <http://distrowatch.com/knoppix>

Linux and OS SIG Repository News - <http://groups.melbpc.org.au/~linux/html/iso-news.html>

CABLE 'V' ADSL – PART 1

Article by RON SAVAGE

INTRODUCTION

This article will discuss some of the factors which will influence whether you choose cable or ADSL.

ADSL is an acronym standing for Asymmetric Digital Subscriber Line Transceiver (http://en.wikipedia.org/wiki/ADSL_modem).



Cable refers to connecting a computer to the internet via the Pay-TV cable.

ADSL refers to connecting a computer to the internet via a phone line.

My work at Telstra (an Australia-wide communications company) gave me access to about 15,000 network routers, of which a subset are what your phone line plugs into at the exchange. These latter ones are called DSLAMs, DSL Access Modules. From these, messages from your computer go through a set of routers internal to Telstra and are eventually delivered to your ISP (Internet Service Provider). A similar system operates for cable connections, of course.

Again, similar systems are provided by Optus, and any other company competing with these two. In reality quite a few companies rent capacity from these two, but market themselves as though they are independent.

The factors to be discussed include

(1) Availability of the technology, (2) Reputation of the ISP, (3) Reliability of the service, (4) Alleged speed, (5) Cost, and so on.

Actually, it's up to each of you to Google for information about availability in your area, so I will not specially discuss the factor further. Also, your ISP will have a web page dedicated to showing what services are available in your area. You'll need to enter your phone number so the ISP can determine where exactly you'll be connecting to their network.

COMPLICATIONS

As a forewarning of what will follow, I'll mention some complexities which are unavoidable. Also, I'll be spelling out my ways of coping with these complexities.

Firstly, ADSL comes in a range of types: (1) ADSL, (2) ADSL1, (3) ADSL2+.

These basically correspond to advances in technology, although in all computer company machinations, all technology without exception is deliberately crippled, and introduces in a base version with tiny increments in features shelled out over time, in order to maximize financial returns. So, when a specific technology is delivered, that does not mean it could not have been delivered sooner, and there is rarely anything in the West's manufacturing capabilities which means the increments need be as small as they are.

ARTICLE by RON SAVAGE

Secondly, since ADSL access to the internet is delivered via a phone line, your ISP will most likely provide you with a range of phone plans and a range of internet plans, all specifically designed with one goal in mind: Make it as difficult as possible for the (potential) customer to compare plans between companies.

I'll ignore ADSL1 hereafter, since it is not normally offered to customers. In fact, when I switched from ADSL to ADSL2+, I was mistakenly put on ADSL1 for a few days. Think of ADSL as cheap technology and ADSL1 as obsolete technology.

CABLE

Since the physical cables used by Optus and Telstra are, presumably, identical (as seen by the common-or-garden user), how do we differentiate between them? I take into account factors such as:

* Newspaper reports.

Several years ago Telstra suffered a serious blow to its reputation when it was revealed a technician was 'accidentally' sabotaging exchanges, starting in IIRC (if I recall) in Blackburn, and eventually affecting up to 6 exchanges in the Blackburn - Nunawading area. Phone services and internet services were both affected. Also, since then there have been repeated problems with (Telstra's ISP) BigPond's availability. Having no internet access for several days, and lost emails when the service is restored, will clearly have a deleterious effect on many businesses, especially small ones.

* Personal Experience.

I went from dial-up to Optus cable, which is always going to be a big improvement. However I had the impression of slowness at times, and was uneasy about what I was getting compared to what was advertised. The day it took 40 (sic) seconds to send a tiny email, without attachments, was the day I finally decided to act: I switched from cable to ADSL.

Later, at work, I spoke to someone who had just transferred jobs from Optus to Telstra, and was able to finally understand (so I believe) what the problem was (and is). Optus is a very small company compared to Telstra, in terms of installed equipment, so even though we may get similar transmissions speeds 'on the wire', the sheer number of people forced to share the small quantity of Optus equipment in exchanges causes the observed slow-downs. The technical name for this problem is 'congestion', although personally I find different words come to mind...

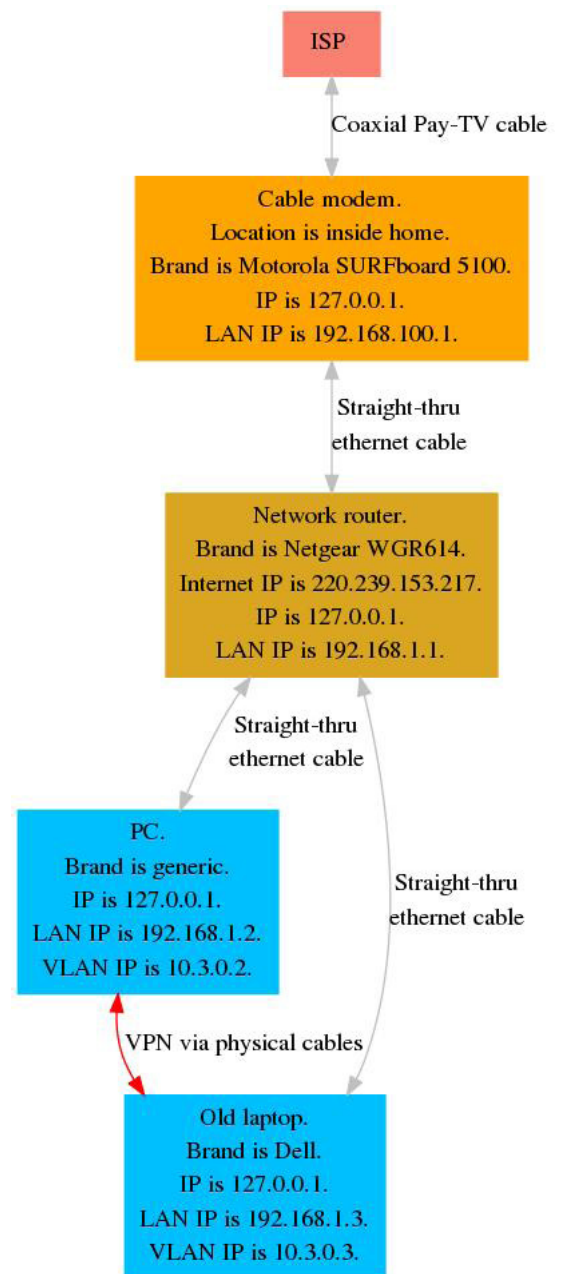


Figure 1.
Old set up, using cable modem.

ARTICLE by RON SAVAGE

ADSL

How do you choose between ADSL and ADSL2+? By price, you might think, but actually there are various personal situations which may influence the decision.

If you have a high-usage requirement, go with ADSL2+. I don't think it matters if the usage is personal or business. Pay for the fastest service you can truly afford.

ADSL PHONE PLANS

This is a different issue from the range of plans offering various download speeds.

As I see it, there are 2 completely different ways of considering this issue:

* Quantity of phone calls.

If you are beside the phone all day, and make a lot of calls, you might go for a plan which offers a low cost-per-call. It doesn't matter if these are private or business calls. It's the quantity of calls which will help you decide.

But don't forget to take your mobile phone into account. Can you switch outgoing calls from the mobile to the landline? If so you'll save money anyway, so you may not care which phone plan you pick. OTOH (On The Other Hand), if you're away from the landline, and hence use a mobile instead, don't go for the cheapest cost-per-call on the landline, since you won't be making that many calls on the landline after all.

I suspect you'd have to ask an accountant (shudder) to make a detailed calculation using your phone records, in order to determine which plan appeared to be the cheapest.

* The ISP's viewpoint.

In pricing these plans, your ISP will gamble on how many people choose each type of plan. This is a safe bet, BTW (By The Way), since it's based on human nature. Most people will pick the middle plan, with fewer and fewer people choosing plans further and further away from the center.

Now, the ISP will calculate: Given the maximum number of people on the central plan, we can afford to lower the profit on that plan, but we'll impose a higher profit on the less-popular plans. So, it behooves the customer to choose the middle plan, on this assumption that the ISP is taking minimum profit from that plan. This means the customer should simply not care about the cost-per-call factor in choosing a plan! Neat, huh?

I take the latter view as the most relevant to me, not really because of this calculation, but because I'd rather spend my days not being an accountant or dealing with one.

ANOTHER FACTOR

Just before you decide, plan how many computers you will have sharing this internet connection. If only one, it's simple. But if several, then the price of the modem becomes relevant.

ISP's frequently have free-installation offers, so wait for one of those if possible. However, there is a catch. The ISP will always offer the cheapest and most limited modem available. So, if you want more than 1 LAN port, insist on a better one, or buy one separately.

That is, the number of computers to be connected to the modem will determine the model of modem you purchase, and it may be that a cable modem which supports the usual 4 ports costs more than the equivalent ADSL modem.

ARTICLE *by* RON SAVAGE

Simultaneously, ask yourself if you'll need wireless capability built into the modem. That makes the modem much more convenient, but more expensive.

If you already have a single-connection modem, consider buying a wireless-enabled network router instead of upgrading the modem. I've written another article recently about connecting 2 computers to the internet via different devices.

Consult that article (part 3) for much more detail. Part 2 is about the trade-offs between cable and ADSL modems.

Ron Savage, Perl programmer.

<http://savage.net.au/>

AN INTRODUCTION TO WEB HOSTING

Article by RON SAVAGE

INTRODUCTION

This article offers some simple explanations of the (commercial) web hosting environment.

HEAVY USAGE

Some people want to host sites which provide massive downloads, e.g. movies, or massive traffic, e.g. games. I'm not discussing those uses in this article.

THE HARDWARE

PCs these days are very powerful, unless you're running an Operating System (OS) explicitly designed to cripple the hardware. You should be able to guess which one I mean - it's such a widely used OS... So, with good hardware and a co-operative OS, it's possible to host a multitude of 'client' OSes on a single machine. The latter are installed from what's called an image.

THE SOFTWARE

Firstly, an OS is installed.

Then a program is installed which controls how much of the machine's resources are available to each client OS. This controlling or management software is often called a hypervisor. An example would be the free Xen - <http://www.xen.org/> - pronounced Zen.

Xen has a range of competitors, but the reason Xen is famous is that its reputation is based on its ability to control the behaviour of those other OSes.

Some hosting companies have a very cynical attitude as the basis of their arrangements. They don't use Xen because they deliberately 'oversell' their host machine's capabilities.

Overselling involves the assumption that at any given instance most web sites being hosted will not be doing very much, so they (the hosting company) are prepared to let some hosted sites over-use their quota of the machine's resources (disk or RAM).



AN INTRODUCTION TO WEB HOSTING

cont' by **RON SAVAGE**

This over-use abuses users of the other sites hosted on the same hardware, but the question is whether or not those other users will actually notice the problem. The oversellers are gambling that most people chose them based on price rather than quality, and so won't care too much about the inevitable slowness of the software.

So, the more ethically-minded hosters tend to use Xen. Obviously people who choose to use something other than Xen will be strong in their denials of deliberate abuse of their customers' trust.

To be fair, there may well be other hypervisors which offer similar features to those for which Xen is famous. There are certainly many claims to that effect.

Finally, after Xen (or whatever) is installed, a set of OSes are installed from images, and these OSes are managed by Xen. It's access to one of these hosted OSes you get when you enter into a contract with a hosting company.

TYPES OF HOSTING

When a machine is running multiple OSes, the hosting company will offer 2 basically different forms of hosting.

MANAGED HOSTING

Here, managed means the hosting company provides staff to monitor the activities of the hosted site, and (at least theoretically) intervenes quickly to resolve issues.

For instance, something might go wrong with the software running on a particular site, and that software starts using 100% of the CPU's power, or 100% of the machine's memory. Such problems obviously have an immediate effect on all other users of that particular machine.

When you contract with a hosting company, you are going to pay more for having staff oversee your site. But, as is often the case in life, there is a cheap alternative.

UNMANAGED HOSTING - THE VPS

Here, the hosting company provides a minimalistic installation of your chosen OS, and you are expected to supervise everything yourself. Typically, this unmanaged arrangement is called VPS - Virtual Private Server. There are a few gimmicky variations on the VPS acronym, but I'll just stick to it. The Virtual refers to the fact that your OS is not really in charge of the hardware, but is effectively only in contact with a virtualized (one-step-removed) view of the real hardware.

The Private refers to the fact that the OS you've chosen to run is all yours. It's private in that you're not sharing it with anyone else's web site. Remember, you are still sharing the underlying OS and hardware, and hence abuse of a separate hosted OS can profoundly affect your experience.

The Server refers to the fact that you effectively have a server 'machine' available for your exclusive use, even though this exclusive use is virtual!

I've put machine in quotes to emphasize that your OS and web site do not really have a server to themselves. You're sharing the hardware via the miracle of hosting with Xen (or whatever).

Note also this usage of the word server differs a bit from when we use server to refer to web servers such as nginx (Engine X), mini-httpd and Apache, or FTP servers, mail servers, etc.

ARTICLE *by* RON SAVAGE

That is, I'm using server to refer to the combination of (virtual) hardware and an OS, over which you have some sort of control, and onto which you can install various software packages, including Content Management Systems (CMSes), web servers, shopping carts, etc.

CHOOSING A HOSTING MODEL

Q: How does anybody choose between managed and unmanaged hosting?

A: Security.

Well, I use security as the basis of the decision. Frankly, almost everyone uses price, which is discussed below.

Note: The only really secure OS is OpenBSD - <http://openbsd.org/> - and it's free, but it's unlikely you'll find a hosting company providing it. Some rare hosts, though, do allow you to supply your own choice of OS image. I personally run Debian - <http://www.debian.org/> - which is a version of Linux. Anyway, if you feel insecure in allowing your web site to face a hostile, i.e. hacker-infested, internet, you go with managed hosting. If you feel you can personally provide the security-oriented knowhow to protect your baby, then you can choose unmanaged.

SOURCES OF SECURITY

Security is an on-going, never-ending drain on resources.

Security is not like a light switch. You cannot turn on security and then forget about it. So, in order to support an unmanaged hosting environment, you're basically going to need to draw on 2 sources of knowledge.

EXPERIENCE

If you have a lot of personal experience in administering Oses, unmanaged hosting may be for you. To gain access to other people's experience, you should frequent an on-line forum dedicated to web hosting, such as <http://forums.whirlpool.net.au/forum/116>.

But there's something else...

SECURITY SOFTWARE

This is in fact a huge and horrendously complex topic, so I'll just give you some pointers. Each OS has its own mechanisms for enhancing security - that's where the experience just mentioned comes in. But there is free, downloadable security software available, too.

For instance, if you go to <http://www.configserver.com/cp/csf.html> you can download csf.tgz, which when unpacked will give you a set of software tools to help you manage your site.

Elsewhere on that web site are other sets of similar tools. I strongly urge you to wander around that site to see what's available. Also, wander round the internet looking for other such tools.

Some useful web sites are listed at the end of the article. One other specific site to investigate is <https://calomel.org/>. Of course, you'll still need experience to be able to evaluate these tools, and to be able to install and run them. And, you'll still need to know how to understand what the reports produced by these programs are telling you. And (gasp), you'll need to know what to do to fix any of the inevitable problems.

ARTICLE *by* RON SAVAGE

THE POINT OF SECURITY

All hardware and software tools (excluding fake virus checkers, etc) are designed to promote the reliability of your site, which includes protection of your resources and data.

My philosophy in all computing matters, is that reliability comes first, middle, and last in terms of priority. We all want our web sites to be up and responsive more-or-less all the time, and we want people using our web sites to be satisfied visitors. More than that, if our visitors are doing more than just viewing our web pages, e.g. they are paying for services or physical products, they want to be assured their details are managed with maximum privacy and security.

TYPES OF ABUSE (OF A WEB SITE)

It should be obvious that a web site can become unresponsive either because another site being hosted on the same hardware is overusing resources, or because an external agent (a hacker) is bombarding the site with fake requests. This latter action is called DOS - Denial of Service.

Security software is designed to tell you about problems with your site, and at best will recommend courses of action to help alleviate the problem(s).

For instance, a reporting tool can tell you that too many attempts have been made to log on to the admin account of the machine, or that too many pointless requests have come from the same IP address (or range of addresses) within a suspiciously short time. The administrator must take action to block such requests. In the case of a managed site, that is the job of the hosting company. In the case of an unmanaged site, that's your job.

BACKUP

One famous problem with hosted web sites is the lack of a backup if something should go wrong. And don't assume that because you're paying for managed hosting that the backups will be made, or will be usable. You must ALWAYS create your own backups, and test that they can be re-installed. That immediately suggests you need 2 sites, one live and one of stand-by.

PRICE

I've left price till last, because given my preference of reliability over cheapness, I don't believe a cheap and nasty hosting company is ever worth the problems. Keep in mind the overselling mentioned above, too. Hosting companies often make offers available on specific web forums, as well as on their web pages.

One such forum is <http://www.webhostingtalk.com.au/> although be warned about 2 things.

Firstly, there's a '.au' on that domain name. The American equivalent, without the .au, is famous for being a waste of time.

Secondly, the exceptionally cheap deals offered are almost without exception of the cheap and nasty type, and are based on the overselling principle discussed. Feel free to choose a cheap deal - just don't squeal afterwards when it's down often, or slow, or the staff don't respond to requests for help, or ... Because? Because it will be completely, totally, utterly and absolutely your responsibility for having chosen a cheap host in the first place. So, to keep an eye on helpful and sceptical feedback from people who've seen many such scams. Do lots of reading, and study lots of code such as the csf.tgz mentioned, before venturing into battle with the sharks.

ARTICLE by RON SAVAGE

SITES OF INTEREST

I visited these web sites today, 2010-08-13. And yes, that's Australian (and world) Standard Date Format.

<http://openbsd.org/>

<http://www.debian.org/>

<http://www.xen.org/>

<http://www.configserver.com/>

<https://calomel.org/>

<http://forums.whirlpool.net.au/forum/116>

<http://www.webhostingtalk.com.au/>

<http://www.whirlpool.net.au/>

http://www.owasp.org/index.php/Main_Page

<http://www.intertwingly.net/blog/2007/01/03/OpenID-for-non-SuperUsers>

<http://openid.net/get-an-openid/>

http://www.akadia.com/services/ssh_test_certificate.html

<http://www.grc.com/nat/nat.htm>

<http://www.cacert.org/>

<http://www.debian-administration.org/articles/618>

<http://biglumber.com/x/web?links=1>

<http://www.cgisecurity.com/lib.html>

<http://www.lightbluetouchpaper.org/>

<http://samy.pl/pwnat/>

<http://oauth.net/>

<http://www.funtoo.org/en/security/keychain/intro/>

<http://wiki.nginx.org/Main>

<http://acme.com/software/thttpd/>

Ron Savage, Perl programmer.

<http://savage.net.au/>

VARIOUS MATTERS TO DO WITH WEB SERVERS

Article by **RON SAVAGE**



This article will prepare the ground for replacing Apache (<http://httpd.apache.org/>), if that's your current web server, with nginx (i.e. Engine X) (<http://wiki.nginx.org/>) and mini-httpd (http://www.acme.com/software/mini_httpd), which together replace much of Apache's functionality. nginx serves web pages, but is explicitly designed not to run CGI scripts, so we configure nginx to redirect such requests (to run CGI scripts) to mini-httpd. And yes, mini-httpd can serve web pages all by itself.

If you do a web search for 'compare nginx and apache', hits such as Joe's Blog! (<http://www.joeandmotorboat.com/2008/02/28/apache-vs-nginx-web-server-performance-death-match>) and many, many other sites, will discuss just why you might want to replace Apache with nginx and mini-httpd.

I say 'web search' rather than google, since I encourage you to try both <http://ixquick.com/> and especially <http://duckduckgo.com/>.

The latter sure has an odd name, but it is both very sophisticated and is written in Perl (<http://www.perl.org/>), my favourite programming language.

One of the links you'll encounter is <http://wiki.nginx.org/NginxWhyUselt>, and yes, being on nginx's web site, you can argue it's biased, but read it anyway.

Be sure to read the on-line help for duckduckgo, since besides search terms you can type in equations to be solved, etc.

A REFRESHER OR TWO

First, a couple of paragraphs from a previous article (Understanding Home Networks) in this series:

"In English, I can refer to myself as I, me or myself. These words refer to 1 person.

In TCP/IP-speak a program on a PC refers to the IP address of the PC as 127.0.0.1, for exactly the same purpose. Here, 1 PC is involved." And here another 3 paragraphs from that article:

"For instance, by default, messages in the HTTP protocol are sent to port 80. So, to do a Google search I could use <http://google.com/> or <http://google.com:80/>, knowing that these 2 forms of the behemoth's web address mean the same thing.

Thus if I have a copy of my personal web site installed on my laptop, and I'm running a web server, I can use <http://127.0.0.1/> to go to the home page of my web site, or I could hit <http://127.0.0.1:80/>."

So, if a web page is displayed without an error message when you hit <http://127.0.0.1/>, you know there is some sort of web server running on your current machine. Of course, an error message could mean either there is no web server running at all, or that one is listening on another port.

ARTICLE by RON SAVAGE

These ports are sometimes called logical ports, to emphasize that they are not like the physical ports into which cables are plugged. They operate in much the same way as letter box numbers in a street do, with the house (port) numbers distinguishing between houses (programs) in the same street (PC).

To summarize, then: Each PC running TCP/IP and DNS software calls itself 127.0.0.1, and web servers (and other programs) listen on ports, and ports have numbers such as 80.

DOMAIN NAMES AND HOST NAMES

There are marvellous articles on these topics on Wikipedia, at http://en.wikipedia.org/wiki/Domain_name, <http://en.wikipedia.org/wiki/Hostname> and http://en.wikipedia.org/wiki/Hosts_file.

BTW: Did you notice how Hostname in that URL did not have an underscore in it?

For our greatly simplified purposes, we can take domain name to be like z.net.au, and host name to be, e.g. zoe. In fact, zoe is the name of my (now retired) desktop machine.

Further, hostname (one word) is a command, which you can run from the command line to display the host name of the machine you're using. Each machine will have a host name. And machines on the same LAN should of course all have different host names.

As an aside, I'd better expand that last point: Let's say we have 2 machines on our LAN, called z1 and z2. And let's assume the administrator has created for me an account on each machine whereby I can log on to either or both machines as a user called ron.

To securely copy a file from z1 to z2 I would use scp (<http://www.openssh.com/manual.html>), which takes as a destination the name of the user (account), an '@', the name of the machine, a ':', and the name of a directory into which the file is to be written.

See http://en.wikipedia.org/wiki/Secure_copy for details.

So, having logged in to z1, I would use the command line "scp my.file ron@z2:/tmp" to copy my.file from (the current directory on) z1 to the /tmp directory on z2. (Since scp is going to have to log on to z2 as ron, it will ask me for my SSH password on that machine, which I've previously stored securely on z1.)

It should be obvious what confusion would ensue if I tried to do that when there were 2 or more machines on the LAN, all called z2. Just for the record, scp would use the hosts file (discussed in the next section), on z1, to convert z2 into an IP address.

That's the end of the aside.

A machine does not need to be connected to the internet, or even connected to a LAN, to have a host name. In other words, the host name belongs to the machine, and is not something that needs a LAN or WAN (Wide Area Network, i.e. internet) to make it exist.

BTW: People with an obsession for TLAs (Three Letter Acronyms) have also 'invented' MAN - Metropolitan Area Network. I kid you not. While host names are simple, domain names are hierarchical, in that au is a top-level domain (TLD), and net is a second-level domain. Yep - we interpret z.net.au by reading it right-to-left. This makes sense when you realize that we can simultaneously have domain names like z.net.au, z.com.au and z.org.au. They are all within '.au', which means '.au' is the broadest grouping.

ARTICLE *by* RON SAVAGE

Clearly, we can call z a third-level domain, and if we want to use `www.z.net.au`, then `www` becomes a fourth-level domain. We could have various sub-domains within `z.net.au`, for instance `shop.z.net.au`, `admin.z.net.au`, and so on.

By configuring the corresponding DNS records, we could arrange for those last 3 domain names to resolve to the same IP address (and hence the same web server), or we could have them resolve to different IP addresses, on the same or different machines. In the latter 2 cases, we could have then have 3 different web servers responding to requests to those 3 domain names. DNS is Domain Name System (http://en.wikipedia.org/wiki/Domain_Name_System). Generally, web administrators configure their web server to automatically redirect requests using (addresses like) `www.z.net.au` to `z.net.au` (or - sometimes - visa versa). This just saves people the effort of typing the leading 'www'.

I say generally, because on rare occasions you'll find that the addresses with and without the 'www' are different web sites. I've personally seen a case where without the 'www' it was an American flatmate-matching service, and with the 'www' it was the Australian equivalent. I spoke to the woman who ran the Australian business, and she denied there was any connexion between the two businesses! Yeah, right.

Also note that the host name does not have to be incorporated into the domain name.

The machine's host name will initially have been assigned when the Operating System (OS) was installed. The domain name(s) are a different matter. When the OS was installed, a default hosts file was (probably) created, containing the domain name(s) of the host, but you can edit the hosts file at any time, so let's discuss that next.

THE HOSTS FILE

Stop Press! Actually, you don't want to edit the hosts file, in case DNS stops working, which will make you look r-e-a-l-l-y stupid. For more, see <http://www.opendns.com/>.

If I request, say, `http://abc.net.au/news/justin` I have no idea what IP address is involved, but a world-wide (distributed) database managed by DNS will provide TCP/IP on my machine with the appropriate IP address of `abc.net.au`, and that's where my request will be sent to.

My OS is debian (<http://www.debian.org/>) - a version of Linux, so my hosts file is `/etc/hosts`.

With MS Windows, your hosts file is probably `c:\win\system32\drivers\etc\hosts` (if Windows is installed in `c:\win`).

Don't be mislead by the fake files `c:\win\hosts` and `c:\win\hosts.sam`. The suffix `.sam` just means sample, and `c:\win\hosts` was used on 16-bit versions of Windows. The start of my (laptop's) `/etc/hosts` file is:

```
127.0.0.1 localhost.localdomain localhost
```

```
127.0.0.1 zephyr.savage.net.au zephyr
```

```
127.0.0.1 z.net.au z
```


ARTICLE by RON SAVAGE

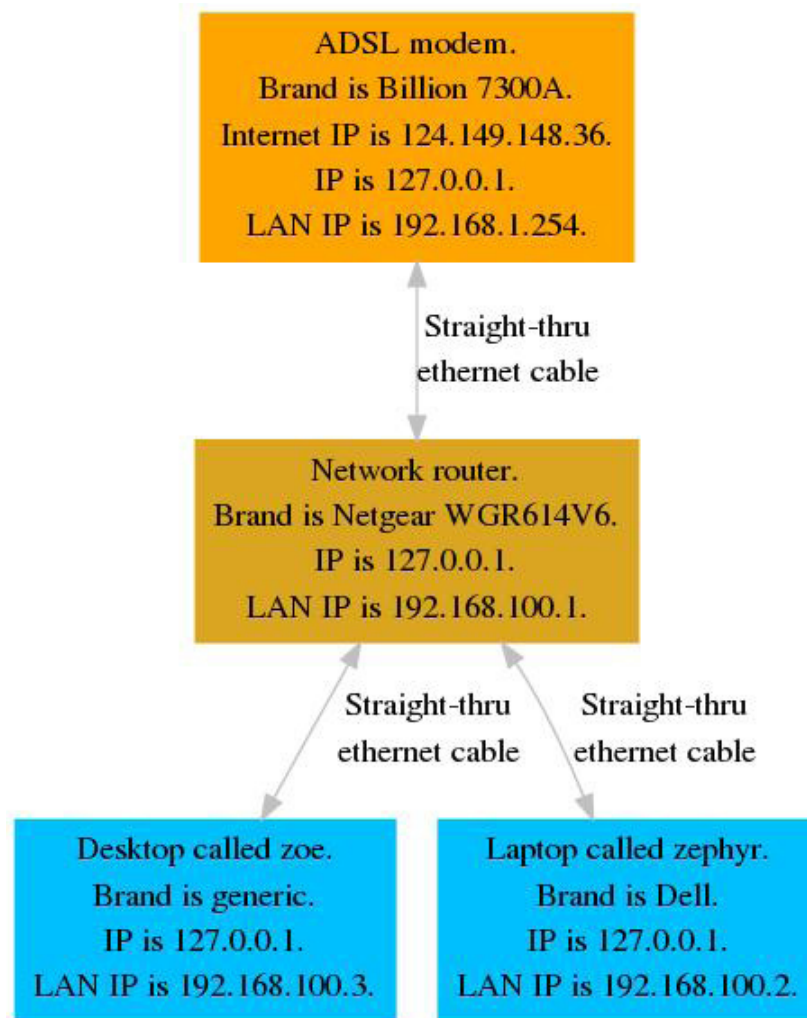


Figure 1.
Home LAN.

Here's where the IP addresses start to come in. These entries are saying that if I refer to localhost, zephyr, or just z, then DNS will translate these (English) names into 127.0.0.1.

Here's a bit more of that file:

```
192.168.100.2 zephyr.savage.net.au zephyr
```

```
192.168.100.3 zoe.savage.net.au zoe
```

These just assign yet more IP addresses to the my laptop and desktop. See figure 1.

BUT WHY? I HEAR YOU CRY

Why introduce all this stuff about IP addresses anyway?

Because HTTP requests and responses are actually wrapped up inside TCP/IP messages as they travel across your LAN or the internet, which means a request such as `http://abc.net.au/news/justin` can never be transmitted unless TCP/IP and DNS are running on your machine, and on the machine running the web server, and on all machines in between. That's why. This explanation is repeated below, in a little more detail.

The same goes for FTP requests and responses, email, etc.