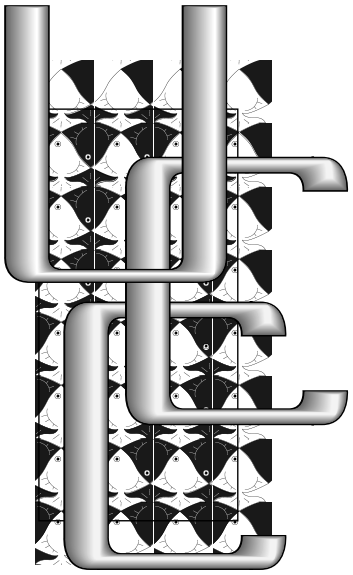

# A Fresher's Guide to the UCC

University Computer Club, University of Western Australia

March 1, 2001

# Foreword

If you're a new member, try and read this. It'll help you get involved with a great club and make use of the tremendous computing resources the club puts at your disposal. This is a great chance to learn about the operating systems that drive much of the world's computing, and use hardware that you certainly won't find at home!

More to the point, UCC members are great people. Make sure you come up to the club room and hang out — every Friday night is pizza night (orders taken around 7pm). Subscribe to the email lists and get details on jobs, parties and interesting 'stuff' that's going on in the world.

The latest version of this document (including hyperlinks not shown in the printed version) is available at the web address:

http://www.ucc.guild.uwa.edu.au/infobase/guide

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# Contents

# 1 Introduction

The aim of this guide is to help new members get involved with the club. The UCC can be intimidating to new members — lots of strange looking computers (not all IBM PC derived!) and unusual operating systems (not just Windows!) But stick around and you'll get skills and knowledge that are both useful and fun.

Over the last couple of years a free operating system called Linux has gained quite a lot of attention. The UCC runs Linux, but that is by no means the only operating system you'll be able to work with as a member. There are boxes running quite a few of the non-free Unix operating systems (Solaris, Digital Unix) as well as Mac OS and BeOS.

If you haven't used Unix or similar systems before, then this document should give you a hand. If all you want from the club is to be able to check your email, hopefully that will be made clear. And if you already have experience with Unix (and other operating systems that aren't Windows) you may want to read this for the information about the UCC itself.

## 1.1 What is the UCC?

The University Computer Club was founded in 1974 (it turned 26 in 2000!) to promote awareness of computer science and to provide students with computer facilities that would normally be inaccessible. We have pizza Friday nights and a drinks machine — you dispense drinks electronically (described in section 3.9 ). We have regular social events plus we have our own clubroom on campus. You might be interested to read the club's history[1].

## 1.2 Where is the clubroom?

Have a look at the map below. It shows some enlarged portions from the UWA Crawley campus map. The area of interest is the Guild buildings which are adjacent to Hackett Drive entrance number two. Basically, you just wander behind the Tavern, go through the door on the right and take the stairs upwards. UCC is on the right from the top of the stairs.

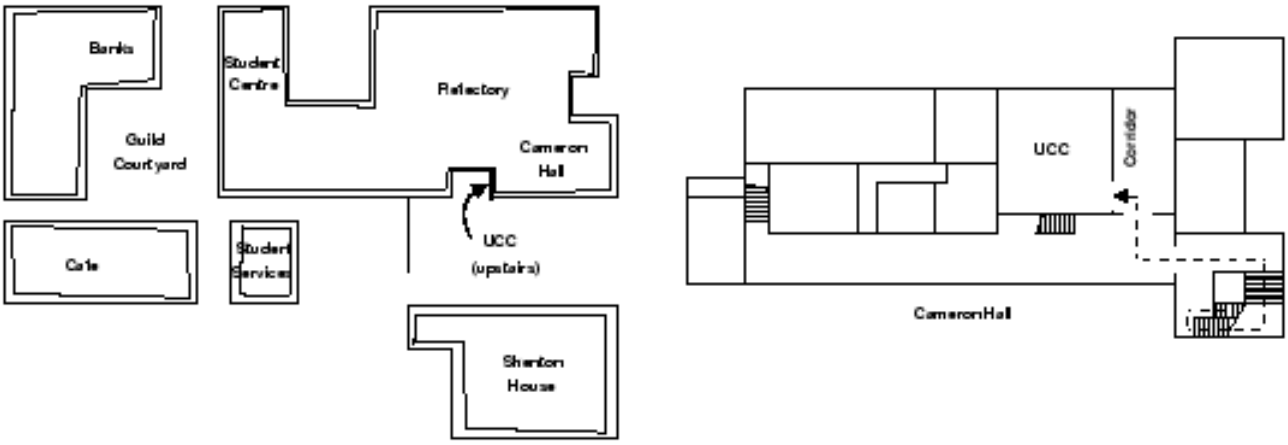


Figure 1: A map to UCC, showing its location within the Uni grounds and also Cameron Hall

## 1.3 What is the committee and what does it do?

The UCC committee[2] comprises a President, a Vice-President, a Treasurer, a Secretary, three Ordinary Committee Members ("OCMs") and a First Year Representative ("Fresher Rep"). The

[1] http://www.ucc.gu.uwa.edu.au/aboutucc/history.ucc
[2] http://www.ucc.gu.uwa.edu.au/infobase/groups.ucc

committee is responsible for the general running of the club.

The *President* is the figurehead of the club — the contact point between UCC and the Student Guild[3]. He or she is also supposed to ensure everyone else is doing what they are supposed to.

The *Vice-President* fills in for the President whenever necessary and assists the President in his or her duties.

The *Secretary* takes the minutes at meetings, emails minutes out to the UCC list, and handles correspondence.

The *Treasurer* looks after the club's bank accounts and payment of bills.

The *OCMs* are there to assist the executive (the four positions above) in whatever way and to provide conflicting and reinforcing positions to committee meetings so that committee makes better decisions.

The *Fresher Rep* represents members which have joined for the first time, including first year UWA students. It's important that are new members are able to get their say in too!

It is *very* important that people turn up to the Annual General Meeting (AGM) to elect the committee. Freshers can run for any position!

To make sure you are notified when the AGM is scheduled, please join the `ucc-announce` mailing list (described in section 2.2 on page 4).

Ordinary members (including freshers) may also attend normal committee meetings without prior arrangement. (Subscribe to the `committee` mailing list for venue, time and agenda information.)

## 1.4 What are UCC 'groups'?

Groups are the UCC's way of getting things done[4]. We have several groups for different purposes. The main ones are outlined in table 1. Lists of current members[5] are available from the UCC website.

Table 1: Summary of UCC Groups

| | |
|---|---|
| Coke Group | `coke@ucc.gu.uwa.edu.au`[6] The Coke group is responsible for administrating the electronic vending machine. These are the people to talk to if you want to add credit to your Coke account. For information about your Coke account see section 3.9 on page 12. |
| Door Group | `doorgroup@ucc.gu.uwa.edu.au`[7] If the clubroom is occupied, at least one door group member must be in the room, and the door must be open. Door group members are charged with making sure that all members behave responsibly with UCC equipment. Door members can open the electronic door. If the room is ever open without a door member, email `committee@ucc.gu.uwa.edu.au`[8] immediately. |
| Wheel Group | `wheel@ucc.gu.uwa.edu.au`[9] Wheel group are in charge of maintaining the club's Unix machines. As such they have root access and are the people to see if you break your account. |
| Webmasters | `webmasters@ucc.gu.uwa.edu.au`[10] The webmasters group helps in the planning, development and maintenance of the UCC website. If there are corrections to be made, mail this group. |

[3] http://www.guild.uwa.edu.au/

[4] Or not, as the case may be!

[5] http://www.ucc.gu.uwa.edu.au/infobase/groups.ucc

### 1.5 Who can I ask for help?

If you have a problem with your account then just ask a friendly wheel[11] member (a.k.a. system administrator) to fix it. Try and learn from your mistakes so that you don't repeat them, but remember that you can always ask people in the clubroom for help. If its just a general question (programming, campus life, etc) just ask around — someone can probably answer it.

## 2 How to get involved with the club

UCC members enjoy a lots of activities involving network services such as mailing lists and the flame BBS[12] as well as clubroom activities, social events and sponsored retail discounts (see the back of your membership card!).

### 2.1 Setting up a UCC account

Once you have joined UCC you may wish to request a "user account". A user account enables you to use UCC's user machines (themselves described in section 3 ) and receive mail at addresses like `username@ucc.gu.uwa.edu.au` or `username@ucc.asn.au`. You will also get a "dispense account" (see section 3.9 on page 12).

You will need to ask a wheel member[13] to set an account up for you. If you visit the clubroom on O'Day[14] there will definitely be someone around who can help you (see page 2 for directions to the clubroom). Otherwise, find a wheel member some other time and just ask. The best place to look is Cameron Hall, which is described in section 4 on page 13.

In order to set up your account you will need to show your current UCC membership card and you will need to think of a username. Your username will be used for your logins, your email address and your website address. Usernames must be eight letters or less.

### 2.2 Subscribe to the mailing lists

If you want to keep up with club events, activities and discussions then you want to be on the email mailing lists. The volume of email you'll receive varies strongly with time. It often jumps sharply during study breaks. When a frank exchange of views takes place (a.k.a. a flame war[15]) your mail box may be flooded with twenty messages in twenty minutes — but don't worry about it. Most of the email will be fun to read!

Table 2 on page 5 contains a brief description of the first mailing lists you may wish to join. To join these lists visit the UCC's Mailman website[17].

### 2.3 UCC Events

The UCC is a very active club and holds many social events every year. These include gaming nights, competitions, movies, project development days and the special events detailed below.

[11] See table 1 or http://www.ucc.gu.uwa.edu.au/infobase/groups/wheel.ucc
[12] http://www.ucc.gu.uwa.edu.au/services/flame.ucc
[13] http://www.ucc.gu.uwa.edu.au/infobase/groups/wheel.ucc
[14] O'Day 2001 is on Friday 2nd of March.
[15] For descriptions of computing parlance try the jargon file described on page 3.3
[17] http://www.ucc.gu.uwa.edu.au/mailman/listinfo

Table 2: Main UCC Mailing Lists

| | |
|---|---|
| ucc@ucc.gu.uwa.edu.au | This is the main UCC mailing list. You'll receive email about practically any topic if you subscribe, as well as general UCC announcements. All subscribers may post to this list. |
| ucc-announce@ucc.gu.uwa.edu.au | Special UCC announcements are posted here. All members with accounts are subscribed to the list. Only list administrators may post to it. |
| committee@ucc.gu.uwa.edu.au | A list for the public discussion of committee activities and decisions. All members may subscribe to this. There is also a separate committee-only mailing list committee-only@ucc.gu.uwa.edu.au[16]. |
| tech@ucc.gu.uwa.edu.au | A list for the public discussion of technical issues at the club. Any non security-sensitive discussions can be carried out here. |

### 2.3.1 Freshers' welcome

There will be cheap pizza ($2 for freshers), computer games, and people to talk to! More details will be provided closer to the event (probably by email and posters in the clubroom).

### 2.3.2 Annual General Meeting

This year's AGM is to be held on Friday 16 March at 1pm in the Guild Council Meeting Room, 2nd floor Guild Building to the right of the stairs.

### 2.3.3 Every Friday night is pizza night!

Come into UCC on a Friday night to share pizza with your fellow UCCans. Pizza gets ordered when someone bothers (usually 7-7:30pm) and then it's followed up with plenty of things happening. This is the best time to learn anything about UCC or to do with computers in general — lots of people to ask and plenty to interest all.

## 2.4 Work on UCC projects

There are people around working on various insane projects. There are people wandering around with knowledge about practically everything, including electronics and the various types of programming. If you want to find out about ongoing projects just subscribe to the mailing lists (see section 2.2 )) and hang around the clubroom (section 4 ).

Some ongoing projects include robot work and development of electronic brains for the vending machines (so that you can view the contents and dispense from your terminal).

Several current and old-guard UCC members are also working on a project to build a car for the 2001 Darwin-Adelaide World Solar Car Challenge.

If you have projects of your own, you'll very likely find someone willing to help.

## 2.5 Offer to help out

There is always something that needs to be done. Perhaps you could run for committee at the AGM or help in the (infrequent, yet mammoth) clean-ups. If you have a cool coding idea that would be useful and you'd like to implement at UCC, talk to people about it. If you get positive

feedback, write it and then a wheel member might install it so all members can use it (see table 1 on page 3 for contact information).

# 3 Using the computers!

## 3.1 What machines does UCC have?

The UCC has a variety of computers running a multitude of different operating systems. 1999 saw the appearance of a number of SGI[18] (formerly Silicon Graphics) machines[19] running IRIX[20] — the SGI Unix variant.

The staple OS for the UCC is currently Debian[21] GNU[22]/Linux[23]. It is being used to run some of our user machines and several servers. Also present are FreeBSD[24], Sun[25] Solaris[26], and Digital Unix[27]. Non-Unix operating systems include various versions of MacOS[28], BeOS[29] and Windows[30].

### 3.1.1 Machine Categories

You may hear a machine being referred to with such terms as "console box" and "user machine".

Referring to a computer as a console machine indicates that members can sit down in front of it and use its keyboard, screen and (if present) mouse and speakers. Some console machines have special uses in the clubroom such as raster image scanning or playing to the loudspeakers.

A user machine is one which all members can log in to or otherwise access (though you may have to ask a wheel member to set up your login on some machines). Console machines are user machines, as are morwong[31], mussel[32] and mermaid[33].

Some computers are not user boxes. These machines perform dedicated functions and are administered by wheel members (see table 1 on page 3).

## 3.2 How do I log in?

Most UCC machines run multi-user operating systems. This means several people can use them at once. Users are given a *username* — you will choose one when your account is created (see section 2.1 ).

Logging into a console computer is simple. At the prompt enter your username and then your password. If the system complains about an 'invalid login' (or similar) and you are sure that you typed your password correctly, you may not have an account on that machine. Ask a wheel member (nicely :) to create an account. Some machines are only for use by system administrators — for example, mooneye.

[18] http://www.sgi.com/
[19] Kindly donated by Hammersley Iron
[20] http://search.dmoz.org/cgi-bin/search?search=irix
[21] http://www.debian.org/
[22] http://www.gnu.org/
[23] http://www.linux.com
[24] http://www.freebsd.org
[25] http://www.sun.com/
[26] http://www.dmoz.org/cgi-bin/search?search=solaris
[27] http://www.dmoz.org/cgi-bin/search?search=tru64+digital+unix
[28] http://www.apple.com/macos/
[29] http://www.dmoz.org/Computers/Software/Operating_Systems/Microkernel/BeOS/
[30] http://www.dmoz.org/Computers/Software/Operating_Systems/Windows/
[31] http://www.ucc.gu.uwa.edu.au/machines/morwong.ucc
[32] http://www.ucc.gu.uwa.edu.au/machines/mussel.ucc
[33] http://www.ucc.gu.uwa.edu.au/machines/mermaid.ucc

The Apple Macintoshes and the BeBox do not (at the time of writing) require logins. However, if someone seems to be using one of these computers and isn't around, please wait a while before closing all their windows :)

### 3.2.1 Remote Access

UCC machines that are in service are networked[34] via Ethernet (and some via LocalTalk). Most services are available via TCP/IP, though some services use protocols such as AppleTalk or LAT. Services running over TCP/IP are available locally (that is, in the clubroom) as well as remotely (from other IP-networked computers, including dialups from home). Be aware that some console machines may be rebooted often or may be used for intensive non-network activities such as CD writing. It can be incourteous to log in and make heavy use of console machines during the day. Currently morwong, mussel and mermaid are dedicated to network logins. Mussel is not fully set up at the time of writing however, so you should use morwong. Mermaid is likely to be retired as a user box once this occurs.

Some common remote login programmes are telnet, rlogin and ssh. (The dumb terminals in the Cameron Hall corridor operate differently. Follow the on-screen instructions to make a connection to a UCC user box such as morwong.) File transfers can be done using HTTP, FTP and SSH. At the time of writing, FTP can be used with morwong, mermaid or mussel. SSH can be used with morwong, mermaid and mussel.

### 3.2.2 Using UCC's Machines Remotely

If you have a home Internet dialup account (or other Internet access, say at work) with an ISP that's a member of WAIX[35] (most WA based ISPs but not Telstra, Optus or OzEmail) you can connect to a UCC machine by using `machine.waix.ucc.gu.uwa.edu.au` instead of `machine.ucc.gu.uwa.edu.au`

If this doesn't work, you'll have to connect to `ucc.gu.uwa.edu.au` and use the charged telnet tunnel, which will debit your coke account.

### 3.2.3 Reaching the Outside World: SOCKS and WAIX

There are several methods you can use to access the rest of the internet from UCC. The simplest one is to use SOCKS. This charges the amount of traffic you use directly to your coke account. You can use SOCKS with any program that supports it by using these settings: *host:* moon-eye.ucc.gu.uwa.edu.au, *port:* 1080. If a program doesn't support SOCKS, you can make it use SOCKS by typing '`socksify` *command*'. Note that Netscape 4.x doesn't work with SOCKS, but Mozilla does.

Alternatively, if you have a full-access tartarus account (or other UWA server account such as cyllene) you can use the UWA authenticating proxy for web browsing. Just set your browser up as shown on the University Communications Services[36] website at http://www.student.uwa.edu.au/access.

You can also access PARNET[37] (PARNET being UWA[38], ECU[39], Curtin[40], Murdoch[41] and some WAIX addresses (WAIX being the Western Australia Internet Exchange) for free. If or

[34] http://www.cs.uwa.edu.au/undergraduate/units/231.312/
[35] http://waix.waia.asn.au
[36] http://www.ucs.uwa.edu.au
[37] http://www.parnet.edu.au/
[38] http://www.uwa.edu.au/
[39] http://www.ecu.edu.au
[40] http://www.curtin.edu.au/
[41] http://www.murdoch.edu.au/

when a dedicated WAIX machine is set up you will be able to use this to access the rest of WAIX.

For information about UCC's accounting and payment system see section 3.9 on page 12.

If you have questions about network or mail charging, email `mailcharging@ucc.gu.uwa.edu.au`[42].

## 3.3 What is Unix?

Many UCC computers run variants of Unix. Most Unix-based operating systems are quite similar from a user's point of view. The following quote is from the Jargon File, as maintained by Eric S. Raymond, and should explain a little about where Unix came from:

> :Unix:: /yoo'niks/ /n./ [In the authors' words, "A weak pun on Multics"; very early on it was 'UNICS'] (also 'UNIX') An interactive time-sharing system invented in 1969 by Ken Thompson after Bell Labs left the Multics project, originally so he could play games on his scavenged PDP-7. Dennis Ritchie, the inventor of C, is considered a co-author of the system. The turning point in Unix's history came when it was reimplemented almost entirely in C during 1972–1974, making it the first source-portable OS. Unix subsequently underwent mutations and expansions at the hands of many different people, resulting in a uniquely flexible and developer-friendly environment. By 1991, Unix had become the most widely used multiuser general-purpose operating system in the world. Many people consider this the most important victory yet of hackerdom over industry opposition (but see Unix weenie and Unix conspiracy for an opposing point of view). See Version 7, BSD, USG Unix, Linux.

You can read more of the Jargon file by typing '`jargon` *keyword*' at a shell prompt on mermaid.

## 3.4 Shells and login scripts

When you log into a Unix machine, whether remotely or on the console, an interactive shell is run. Many shells exist with different features (bash, tcsh, zsh[43], or other shells[44]). When your account is created your default shell is set (probably as bash or zsh — there is currently a debate about which).

At the time of login the shell runs your *startup scripts*. These specify aliases, run useful programs and display information to your terminal. For zsh the startup script is `.zshrc`. Be very careful editing this script — change it incorrectly and you may be unable to log on to some or all machines.

To avoid this happening, test the script *before* logging out. The command '`source ~/.zshrc`' should do the trick. This will run the script and (hopefully) report any errors. Alternatively re-run your default shell (by entering the relevant command like '`zsh -l`' or '`bash`'). The new shell will load the global configuration and your local configuration in the normal order. Press `CTRL-D` to return to your previous shell prompt once you have noted any errors.

### 3.4.1 Your path

An important point needs to be made here. Your *path* is the list of directories scanned by your shell when you attempt to run a program. You may often wish to run programs in the current directory.

[42] mailto:mailcharging@ucc.gu.uwa.edu.au
[43] http://sunsite.dk/zsh/
[44] http://www.shellscript.com/

By default the UCC login scripts do not include the current directory (also referred to as the '.' directory) in your path. You need to explicitly state the location of the program you wish to run if it is in the current directory, and that directory is not in your path. If you have a program 'hello' in the current directory, you would type '`./hello`' to run it.

If you wish you may add the current directory to your path. It is not there default for an important reason — *the current directory may contain hostile executable files.* For example, if a hostile program named '`ls`' was in the current directory you might type 'ls' and suddenly have all of your files deleted.

## 3.5 Common Unix Commands

This section documents common Unix commands. They are fundamental and should be implemented almost identically on any Unix platform. (Be aware, however, that different operating systems may expect different command-line arguments and produce different formatted output). See Table 3.

If you which to use GNU tools you may need to put `/usr/local/bin`, `/usr/bsd/` or `/usr/freeware/b` in your path.

Table 3: Summary of Common Unix Commands

| *Command* | *Basic syntax/Example* | *More info...* |
|---|---|---|
| cd | `cd` *directory* | 'cd' changes your current directory. You can specify the directory to change to in two ways — using *relative* or *absolute* paths. *Relative* paths use two special directories — '..' refers to the directory above the current one and '.' refers to the current directory. *Absolute* paths have a leading reference to the *root* directory — '/'. cd with no parameters returns you to your home directory. |
| pwd | `pwd` | 'pwd' prints the current ("working") directory. |
| mkdir | `mkdir` *directory* | 'mkdir' creates a new directory with the nominated name (provided an existing file or directory with the same name does not already exist). |
| cp | `cp` *source destination* | 'cp' is used to duplicate a file. If you want to copy *every* file in a directory and its subdirectories then use 'cp -r *directory new-directory*' |
| exit | `exit` | 'exit' exits the shell you are currently running. |

Table 3: Summary of Common Unix Commands

| *Command* | *Basic syntax/Example* | *More info...* |
|---|---|---|
| logout | `logout` | 'logout' logs you out of the *login* shell you are currently using. |
| man | `man` *name* | man is used to get help on a command or topic. Type '`man man`' for more information on man :-) |
| info | `info` *name* | info is used to get help on a command or topic using a hierarchical viewer. Type '`info info`' for more information on info. |
| ls | `ls` | 'ls' displays a listing of the current directory. By default files beginning with the '.' character are *hidden*. To have these files included in the listing use the '-a' option. The '-l' option displays more information on each file. An extremely common use of the command is therefore 'ls -alF'. |
| mv | `mv` *source destination* | 'mv' is used to move a file. The mv command is used with exactly the same syntax to move a directory as to move a file. |
| rm | `rm` *filename* | 'rm' is used to remove a file. If you want to remove *every* file in a directory and *all* directories within it then use 'rm -r *directory-name*' |
| more | `more` *filename* | 'more' is used to view a long document one screenful at a time. (Press spacebar to scroll down and 'q' to quit.) |
| less | `less` *filename* | 'less' is used to view a long document one screenful at a time. It has many more features than the 'more' command. You can set 'less' to be your default pager for 'man' pages by exporting the variable `$PAGER` equal to `less` from your shell. |

Table 3: Summary of Common Unix Commands

| *Command* | *Basic syntax/Example* | *More info...* |
|---|---|---|
| chmod | `chmod` *flags filename* | 'chmod' is used to record in a UNIX filesystem what types of users can access your files and in what way. Read the 'chmod' man or info pages to gain an understanding of file permissions. |

## 3.6 Editing files under Unix

Various editors exist for Unix operating systems. A common editor for beginners is *Pico*. It is easy to use and simple, although less powerful than other editors. *Emacs*[45] and *VI*[46] are the two editors typically used by experienced Unix users.

Both Emacs and VI are extremely powerful and available on almost all Unix systems. For more information on Unix editors browse the web — there are many very good FAQs available.

If you invoke an editor you are unfamiliar with or unable to use, the key sequences in table 4 may be used to exit without writing any changes to disk.

Table 4: Exit Keys for Some Programmes

| *Programme* | *Key Sequence* |
|---|---|
| `vi` or `vim` | :q! |
| `emacs` | CTRL-x CTRL-c |
| `pico` | CTRL-x n |

## 3.7 Do I get a web page?

Members can create their own web sites and web pages. To do this, log in and create a directory like this:

```
cd
mkdir public-html
chmod a+rx public-html
```

Note that `public-html` contains a *hyphen* not an underscore.

You can then put files into your `public-html` directory (either via your login or via file transfers) which is accessible from either:

```
http://www.ucc.gu.uwa.edu.au/~yourusername
```

or

```
http://www.ucc.asn.au/~yourusername
```

You will need to make sure your public files are "world readable" (see `chmod`).

[45] http://www.gnu.org/software/emacs/
[46] http://www.vim.org/

## 3.8 Customising your account

The account management system at UCC is under active development. It's recommended that you ask someone how to change your account details :)

Feel free to email questions, or report problems with the machines or software, suggestions for drinks to put in, and so on to the Coke group or committee.

## 3.9 'Dispense' Accounts

Without a doubt, '`dispense`' is the single most important programme to live at the UCC. Over the years it has mutated from a simple way to get drinks from the drinks machine (see section 4.2 on page 13 to a vital UCC accounting, network services and even password and username checking system.

### 3.9.1 Maintaining your Dispense (or Coke) Account

The UCC drinks machine does not accept money. To get drink out of it you must first get some "Coke Credit" into your account[47]. The normal method of doing this is to yell "Is anyone in the Coke group here?" in the clubroom. Assuming someone says "Yes!", you can ask them to put some credit into your account. They will take your money or ask you to put it into the UCC cashbox. In the latter case, get one of the plastic bags from a box on top of the filing cabinet, put your money in the bag and tell the Coke group member the amount and the bag number before putting it into the marked receptacle.

### 3.9.2 Using the Electronic Dispensary

Type '`dispense`' at a prompt on morwong, mussel or mermaid. This will bring up a menu of what's currently available. along with your current account balance. Use the arrow keys to move up or down, or type in the number of what you'd like. Presssing the return or enter key will dispense whatever the arrow is pointing to, and pressing the escape key or '`q`' will quit.

If you dispensed a drink, you should hear the machine in action within a few seconds. You can then pick up your chosen can.

If you know what you want, you can bypass the menus and type "`dispense` *drinkname*" for the first thing with a name starting with the letters in *drinkname*. The system isn't perfect, and there can be problems. Sometimes, it may just be slow. Other times the drink machine itself will stop working. Keep an eye on your account—mistakes or software problems have given people the wrong balances on many occasions. If in doubt, you can examine the logs on the system—ask someone in Coke group for help.

Type '`man dispense`' for more information.

### 3.9.3 Automatic and non-Automatic Deductions

You'll notice that in the bottom half of the `dispense` menu there are other choices. These let you pay for non-food items, conveniently, with your credit. If you make a call to somewhere outside of the University from the club telephone, for example, you should dispense a 'phone' to pay for the call. If you print something on a clubroom laser printer, you should dispense a 'laserprint' for each page.

Apart from your deliberate use of the `dispense` command you may accrue incidental charges for services such as incoming network traffic. Network traffic charges are automatically deducted from your account. If automatic deductions remove all funds from your account you will be sent an emailed notification. See section 3.2.3 for more information about network traffic charges.

[47] Referred to variously as your 'dispense account' or 'Coke account'.

# 4 Using the clubroom

The UCC's clubroom is a tidy-resistant zone located at the top of Cameron Hall.

The clubroom is opened by someone from the door group. Any member is free to come up and use the machines whenever they want and there are some terminals outside so they often can use the network even when access to inside the clubroom is impossible.

## 4.1 Cameron Hall

Cameron Hall can be accessed any time the front door is open. However, the door is not opened every day 9am to 5pm like other buildings. It is opened "on demand" (usually by Club Presidents or other entrusted people). During semester Cameron Hall will be open a lot, and sometimes during the evenings also. It might be wise to phone ahead to check whether anyone's in.

If you want to get to Cameron Hall from off the University's Crawley campus have a look at the club's Contact page on its website[48].

## 4.2 Corridor and Vending Machines

Once inside Cameron Hall you will find that the top-floor doors may or may not be locked. If they are unlocked you can wander into the corridor outside UCC (as shown on the map on page 2 ). Here you will find some "dumb terminals" which you can use to log in to UCC machines.

In addition to the terminals, the UCC has two vending machines[49] in the corridor. The drinks machine operates only via UCC's electronic dispensary (see section 3.9 ). The snack machine is currently only coin operated—and one of UCC's ongoing projects is to rectify this! If you have electronics experience we'd love to have you involved.

If you have trouble with the vending machines, email the committee.

If you see any suspicious activity or find UCC property in an unusual state, email the committee (committee@ucc.gu.uwa.edu.au)[50].

## 4.3 Clubroom

During semester the clubroom is usually open from 9AM to 11PM weekdays and 11AM to 11PM on weekends (provided that Cameron Hall is open). You can check to see if anyone's in by viewing the webcam[51].

When you enter the clubroom (there is only one door) you will be facing the noticeboard (on the far wall). Various official notices are placed on the noticeboard (such as announcements of general meetings). Additionally you'll find some humour and takeaway food pricelists.

The clubroom sometimes gets remodelled, but in essence the periphery of the space is occupied by user machines on desks and books in the shelves and the centre of the room is reserved for tables and chairs were you can lounge. At the time of writing the southern end of the clubroom boasts some large shelves which stock various spare parts and interesting equipment (some of it labelled!).

Also, some members have pigeon holes which sit behind the door. If you need to leave something for a committee member, put it in their pigeon hole and email them.

Another notable installation in the clubroom is the machine room. The machine room is where the non-user machines are locked up.

The clubroom also has a tool cupboard described below.

[48] http://www.ucc.gu.uwa.edu.au/aboutucc/contact.ucc
[49] http://www.ucc.gu.uwa.edu.au/services/drink.ucc
[50] mailto:committee@ucc.gu.uwa.edu.au
[51] http://webcam.ucc.asn.au/

### 4.3.1 Books

The UCC has a vast library of various books and periodicals which users can read at the club room. Among other topics, the club owns books on subjects such as electronics, networking and systems administration.

### 4.3.2 Tools

There are tools for destroying (fixing) computers: soldering irons, a digital oscilloscope, screwdrivers, resistors, multimeters and plenty of cables. If, however, you prefer brute force, we also ahve a drill, jigsaw, hammer, files, hacksaw, chisels and more!

You can see the tool cupboard (in a former state) on its own web page[52].

# 5 Common questions

## 5.1 BeOS

**What the heck is a BeBox?**

The BeBox is based loosely around the Apple Macintosh design. It features two 133Mhz PowerPC processors. The two sets of yellow lights on the front of the BeBox represent the CPU usage of each processor!

The Be is currently running BeOS. BeOS appears to be a reasonable operating system, but application development for the BeBox hardware seems to have stalled. The BeOS release for the Intel architecture appears to have a much larger software base. As it stands the Be lacks much in the way of useful software.

## 5.2 IRIX and the SGIs

**Where did you such cool machines appear from?**

Hammersley Iron kindly donated a SGI $O_2$ and Indigo 2. These machines are very useful for 3D tasks — especially OpenGL programming. They also seem to be used for Quake a lot.

**Common commands give 'file not found'.**

IRIX has a slightly different directory structure to Linux. You're probably missing '/usr/bsd' and '/usr/freeware/bin' from your path.

## 5.3 Apple Macintosh

**What operating systems are available for the Macs?**

Currently the UCC's Apple Macintosh computers are running various versions of MacOS. including MacOS 9 and MacOS X Server (also known as Rhapsody and Darwin). MacOS X is a result of Apple's purchase of NeXT and is effectively a successor to NeXTstep.

**I can't log in to Mac OS X. How do I boot to Mac OS?**

This section only applies to the G3, which dual boots Mac OS X and Mac OS 9. Mac OS X does not at the time of writing have all user accounts. If you want to use MacOS rather than Mac OS X click the 'Restart' button and hold down 'Option' until you see the MacOS logo.

[52] http://www.ucc.gu.uwa.edu.au/services/tools.ucc

The default operating system is Mac OS X. If want to use Mac OS X simply reboot the machine — Mac OS X will boot automatically.

### 5.4 Printing

UCC owns several working[53] laser printers. A system to make the printers from all user machines is currently being devised. The simplest answer is: ask someone.

### 5.5 X Windows doesn't load

Some of the UCC's terminals run X Windows (and are called *X-Terminals*) — for example the small white Labtams. There can be a few problems when logging into these, and hopefully this section will help. A *dumb terminal* can only operate in text mode — we have a few of these outside the clubroom.

If, after logging in, the screen goes blank for a second or two and then the login prompt reappears you probably have a problem with your '.xsession' file. This file specifies the commands to be run immediately upon logging in to an X Session Manager. A neat trick that works on most X session managers is to enter your username and password, but instead of pressing `<enter>` after entering your password, press `F1`. You will be given a secure startup, usually giving you a command prompt so you can run a window manager.

This file may attempt to run a command (such as a window manager) which doesn't exist. The easy way to fix this is to log in to a plain text console (for example the dumb terms) and execute the command '`mv .xsession .xsession.broken`'. You should now be able to log into X. It is probably a good idea to have a look at the '`.xsession.broken`' file and see what was wrong with it. Also see the file '`.xsession.errors`' which will explain the reason for past failures.

## 6 More information

Much of the software you will use on a day-to-day basis is a product of the open-source movement. This movement is largely internet based — so if you want to find out more about a project, have a look on the web.

UCC has an extensive collection of reference manuals. In particular the Sun manuals along the wall next to the door are *really* good. If the relevant man page doesn't have enough information these might be able to help.

Table 5 details some of the most useful websites for people interested in Unix operating systems and computing in general.

If you have any questions after reading this Guide, don't hesitate to ask someone. Come up to the clubroom. Nobody bites and we're all more than willing to help. You could also browse the UCC web page (see table 5) which contains a lot of information.

Have a great time at Uni, and the UCC looks forward to seeing you!

[53] At least some of the time

Table 5: Useful web sites

| | |
|---|---|
| http://www.ucc.gu.uwa.edu.au/ | The UCC homepage! Information is posted here from time to time, including committee minutes, policies and cool CGI-scripts. |
| http://www.gnu.org/ | The homepage of the Free Software Foundation. These are the people that created gcc and many other utilities commonly used under Linux and other Unixes. |
| http://www.linux.com/ | This is the official Linux homepage. A very useful resource that links many more specific sites. |
| http://www.debian.org/ | The official homepage of Debian GNU/Linux. This is the flavour of Linux currently predominating within UCC. A useful site for news and updates. |
| http://www.slashdot.org/ | Slashdot describes itself as "News for Nerds. Stuff that matters." It provides interesting reading if you're interested on the latest computing news. |
| http://www.freshmeat.net/ | Freshmeat is *the* repository for free software. This is the place to visit to look for free software, or to find out about updates. |
| http://www.google.com/ | Google is a popular WWW search engine with minimal graphics and advertising. It often returns excellent results. |
| http://www.dmoz.org/ | DMOZ is the open directory project. It is the basis for http://directory.google.com/. Web sites are divided into categories which can be browsed. This is a good starting point for learning about a new subject. |
| http://mirror.aarnet.edu.au/ | This is the home page for the AARNET FTP mirror site. This mirror contains a very large quantity of popular software (including operating systems, applications, scripts, texts and games). It is much faster and cheaper to download from AARNET than it is from overseas repositories. |