Facility Manager’s Report, 10 March 2000

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The main issues of concern since the last meeting have been to do with ensuring that the school’s computing facilities have been operational for students for the start of session.

Mechanical Engineering Undercroft

For most amongst these has been the refurbishment of the Mechanical Engineering undercroft.

This was to be done in two stages:

  stage one: rebuild the old bell and spoons labs to make four smaller labs, each with 17+ computers.
Stage two: build a new lab in the open area to the west of the old bell lab, including the area used by two small rooms there. This stage would also include moving the Help Desk to the room to the west of the old spoons lab. A doorway will also be opened to the south, allowing easy access to the Mech Eng union cafe, and the School Office in the K17 building.

Stage one was due to finish in time for the start of session, but due to some confusion and construction difficulties, this has not yet been finished. As a result, we are currently down approximately 68 computers (in four labs) from what we were expecting to be available for the start of session.

With the assistance of the Dean of Engineering, this work has now been made a priority project. Progress is moving on apace and we should be opening the labs early next week.

The actual timetable for the bell labs currently reads:

- Thursday: move furniture into new labs
- Friday: take delivery of new computers, unpack and assemble
- Monday: install software
- Tuesday: open lab for classes and general access

The two spoons labs should follow a day or two later.

I am currently reasonably confident that this schedule will be kept; it has not slipped over the last three days and work is now very near completion.

Stage two will not start until stage one is complete and the schedule for that is not yet determined. However, we expect to have the fifth Mech Eng lab open by the end of the mid-session break, in time for the end of session peak.

As I type (Thursday), work seems to be on schedule. As I type more (Friday morning), the first 34 monitors have arrived and the computers are due to arrive from Melbourne any minute. The data sockets are yet to be terminated but this will happen either this afternoon or tomorrow (Saturday). It is looking on schedule.

Thesis Lab

The other main lab area yet to be set up is the undergrad thesis lab which has moved from EE-3 to K17-1, and by the end of session will grow from 14 computers to 50 computers.

None of the first 14 computers are yet set up, our efforts have been required elsewhere for the first two weeks of session. They should be online during next week, how late depends on how much collective time the ME labs use.
Database server

The SUN E450 server for database teaching has finally arrived (there was a factory recall on the hardware RAID controller before our server left the factory). After some discussion, SUN eventually shipped the box without the RAID controller (ie, un-RAIDed disks), and the RAID controller will be fitted as a no-cost field upgrade as soon as it is available.

This all means, of course, that it will not be running for session one teaching. I hope to have it up and installed by the end of next week for the database people to play with in preparation for session two.

As a consequence of this, dingo is still the server for session one database teaching. It may be retired to some other function next session.

Staff Issues and CSG Work Load

Zebee is leaving

Zebee Johnstone has taken a position elsewhere. She has been doing a lot of work for us over the last two years, particularly to do with networking, laptops, Mac backups, statistics and dial-in PPP. Thanks Zebee.

The paperwork for filling her position has been depatched, and hopefully should be advertised next week.

Van is going part-time

Van Ly is studying part-time while working full-time for the CSG. Unfortunately, he is finding (as many do) that mixing full-time work with study is a very difficult juggling act. In his case, he has been maintaining his commitment to his work with the CSG, but his study has suffered.

He has therefore decided to to part-time work for the next two years to finish his degree, working Wednesdays, Thursdays and Fridays. This started this week.

Van has, over the past year been divesting himself of the PC support functions that previously he shouldered alone. Many of the CSG now have MS training, and several are now MSCE (but please don’t hold it against them). Similarly he is shedding himself of much of the Mac support rˆole that he had borne before.

Although these parts of Van’s work will be covered by other in the CSG, the CSG as a whole are now understaffed by nearly half a person. Please see the section New Desktop Support Person below on how I would like to cover this.
**Help Desk Manager**

The student numbers, and hence the load on the undergrad Help Desk, have grown dramatically over the last five years. This has lead to a big increase in the load on the Help Desk and on the management of the Help Desk. We have therefore separated out the function of a specific Help Desk Manager (the rôle was previously part of the Lab Manager’s function), and have filled this position casually for almost a year. Pending final approval of the position description, I hope to be advertising shortly to fill the position permanently.

**New Desktop Support Person**

There has been a re-arrangement of some CSG duties and positions which has been reported at [http://www.cae.unsw.edu.au/la/meetings/00/managers-0224.html#StaffIssues](http://www.cae.unsw.edu.au/la/meetings/00/managers-0224.html#StaffIssues).

These include the rationalising of *John’s Group*, the nature of which has changed dramatically since those positions were first described in 1994.

The basis of the change is to move the responsibility for the undergraduate Help Desk to the SS group (currently managed by Zain); and to focus *John’s Group* on providing a more complete support of desktop computers.

Part of the motivation for all this is the huge increase in the number of students and staff and computers over the past five years. This has increased the load on the Help Desk (mentioned above) and particularly the increased support for non-conformed desktop computers (NT, Mac, Linux) has lead to a significant increase to related work for the CSG.

To facilitate this support, I would like to have a full-time software person in John’s team.

As mentioned above, Van is moving to part-time employment for the next two years, in an attempt to finish his degree. To replace the staff-time lost by this, I am interested in employing a full-time person (rather than a part-time person) and having the new person working in John’s group.

This has been discussed previously, and we will be drafting position descriptions for all member of John’s team in the near future, including the proposed software person.

**SS Load**

It has also become apparent that the increased numbers of students, staff and computers has seriously increased SS’s work load. Despite best endeavours, the Unanswered SS mail queue has not dropped below 50 since before the start of session; and the Pending mail queue has risen to that number. Turnaround time for SS responses has therefore become very long — many hours rather than many minutes.

At this time last year, SS was able to effectively get the queue length down to zero at times during the week. Similarly, previously during ‘quiet periods’,
we have been able to use SS time for software installations and other such tasks. For the last two inter-session breaks, they have not had enough spare time for such jobs.

Part of the current increase has been the after-effects of the move, but we feel that the sheer increase in the number of calls to SS is the primary factor. Zain and I will be doing some analysis of the number and nature of SS queries.

I expect that I will shortly propose an additional part-time SS position, or propose extending the hours of current SS staff to provide an equivalent increase.

Issues from last FC meeting

New accounts on new NFS server

Concerns were raised about the stability of glass, the new NFS server, and whether it was wise to put all new students on such a machine. I was to follow the matter up with Neil.

Neil expressed a very high degree of confidence in the NFS software, and a high degree of confidence in the RAID software, the ext2 filesystem, and with the hardware.

Unfortunately, glass stopped serving NFS requests on the Friday afternoon of week 1, and it was rebooted. NFS was disrupted for about 30 minutes. Neil’s autopsy report reads:

The problem was that all the nfs threads were blocked trying to read-lock the export table (which gets write-locked whenever a new machine mounts the filesystem off glass). I don’t know why the read locks were hanging.

I have instrumented the kernel so that if it happens again (which I don’t think is likely, but it certainly possible, especially as I don’t completely understand the problem yet) then I will be told some more detailed information about exactly what is going one, and quite possibly, the problem will self-heal.

At this stage, there has been no sign of the problem re-occuring.

Double disk quotas

Andrew requested that the disk quotas for all coursework students be doubled. This reflected increasing data-bloat since the quotas were first set some years ago, and that we are now providing reasonably cheap storage.

This has been done.
Assets DB

Many months ago David Pisch asked for some extra fields in the Access/SQL assets database which was written by Nick Maddern several years ago. This has not happened, principally because we (as a group) have little Access or SQL knowledge, and that at any one time (especially in the last three months) have always had something that was more critical to distract us.

Taking advantage of our proximity with the Engineering Faculty Computing Group, Peter and Van have had several conversations with Mok (of the faculty group) who has much more experience than us with Access and SQL.

We don’t yet have a plan for doing the work, but that should come out of conversations over the next couple of days.

Mail to Student Numbers

Although student numbers are now deemed personal information, and are no longer used for new accounts, it is convenient for academics to be able to mail student numbers directly without going through the priv upi command.

Neil is in the process of setting this up, and it should be working within days.

Ip Quota Information

Ip quotaing is now happening. It was considered that the commands for query- ing quota usage be easier to use and more informative. Peter has written and rewritten a command, now simply called ipq, which gives a useful summary. There is also a web page at http://www.cse.unsw.edu.au/~ipq/ which has some description of aspects of the Ipq system.

Pdf Viewers

There has been a continuing issue about unsatisfactory tools for viewing and printing different forms of pdf files. acroread is probably the most reliable, but on the older Intel/Solaris systems in the labs is appalingly slow. xpdf is much faster, but does not have the complete functionality of acroread and has not been able to read recent versions of pdf.

The latest version of xpdf was fetched and installed and was able to handle all files which were known to be a problem last year. It has now been made the default Netscape/pdf viewer.

Late-breaking news suggests that there are some pdf files which are still problematic. This is currently being investigated.
\TeX{} to Pdf (with links)

We need a way of getting pdf files generated from latex, with links being honoured and useable.

After some investigation, it looks like a combination of the \texttt{hyperref} package and \texttt{distiller} or \texttt{ps2pdf} are the most useful options.

\texttt{xdvi} does not currently honour links, despite claims in the documentation that it does. We will look to see if a newer version of \texttt{xdvi} is required.

Pdf generation

We should look at other tools for generating pdf, particularly from postscript. I will look at Adobe’s Distiller, and investigate \texttt{ps2pdf}, which apparently does a reasonable job using ghostscript (\texttt{gs}) to do the rendering.

Yellow forms for foreigners

A special \textit{Yellow Form} is required for people outside the University who have accounts on our system. This is because such people are not necessarily bound by University rules, and usually do not instantiate their account by running sirius.

This form now exists, and SS should check that a copy has been signed before creating such accounts.

CSG performance evaluation

There is apparently a requirement that all University salary supplements have a performance related component.

The CSG has started discussing the matter, and I have had some discussion with Peter Ivanov of the Communications Unit, where they they have a performance related component to their broad-band salary scales.

Mail lists proposal

Several of the commonly used mailing lists (particularly \texttt{cse} and \texttt{cse-astaff}) send mail to too wide a group, and can be accessed by too wide a group. I am to make a proposal for how this can be improved. I have not looked at this yet.