ITS Annual Review 03

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Director's Report

2003 has been a year of significant achievement for ITS. We have seen the extension of the network through the deployment of a dark fibre "ring" around many of the University's sites in Brisbane.

This extension allows sites such as the Medical School, the Dental School, Customs House and our facilities at the Royal Brisbane Hospital, the PA Hospital and the Mater Hospital to be connected together and to St Lucia at speeds which are the same as if they were all on the same campus. This is one of the fastest and widest deployments of ultra-fast networks within any university in Australia.

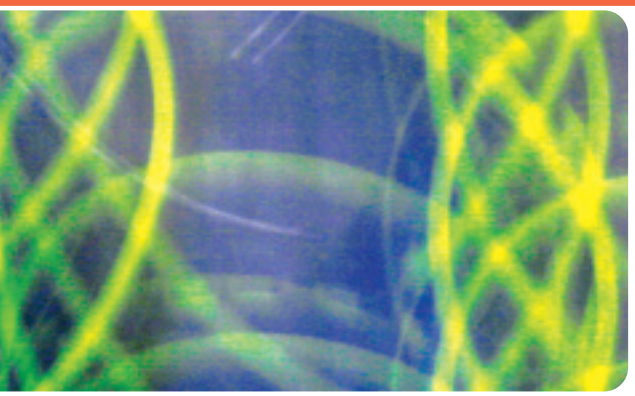
This year has also seen the expansion of AusCERT to operate as the National CERT (Computer Emergency Response Team) for Australia and to provide, with funding from the Commonwealth Government, a National Service for security alerts and security incident reporting. AusCERT now chairs the Asia Pacific CERT group and, with AUSaid funding, is providing training to emerging CERTS around Asia and chairs the Australian Anti-Virus Forum. The AusCERT Conference is now one of the largest IT Security conferences in Australia.

UQconnect, the University's own ISP, continues to provide one of the best free internet services to students of any university in Australia, as well as providing a wide range of offerings to the entire university community.

This year also saw the delivery of the staff portal, a major joint development between ITS and OMC, which is already seeing significant use and has provided the ability for staff to access their "virtual" desktop from anywhere.

2003 has been a year of major achievements and I am grateful to all the staff in ITS and AusCERT for all the hard work and team effort that has made them possible.

Left: Nick Tate, Director, Information Technology Services.



A network for Metropolitan Brisbane

Future-proofing any large investment in networking is always difficult. The technology, standards and expectations change very rapidly. However, with UQnet's new Metropolitan Fibre Service, we will be able to keep pace with needs for many years.

UQ has taken a fifteen year lease on dark fibre services from the tele-communications carrier Uecomm Pty Ltd. The services connect the Prentice Building St Lucia with the School of Dental Sciences in Turbot St, then on to the Edith Cavell building at Herston. This then connects to the Medical School, with the next stop Customs House and finally returning to the GP North building at St Lucia. A short run of UQ fibre connects GP North to Prentice, completing the fibre ring.

Another fibre service from GP North connects to the Mater Hospital, and subsequently to the PA Hospital.

All these services are currently running at 1Gbps (that's 1,000,000,000 bits per second!). Compare this to the 56,000 bps which is the best that you can expect from a dial-up modem'– the fibre service is about twenty thousand times as fast! And by replacing the fibre interfaces on our network equipment, we will be able to upgrade the speed of the link for a comparatively small cost. Within two or perhaps three years, 10Gbps speeds will be affordable – and expected!

But what use is all this speed? Firstly, it gives us the ability to do the same things – faster. So file transfers and downloads happen quicker. Also, having high speed communications gives us the platform to develop new applications for remote interactions, medical imaging and perhaps haptic manipulation. And one of the big bonuses of having fibre services (with true redundancy, in the case of the Herston/Medical School site) is the reliability of the service. As a result, besides having happier users, it gives the opportunity to re-think how we operate some of the critical services needed to provide a reliable network – all designed to give a better and more useful service to our clients.

New Network Policy

In 2003 the Telecommunications Network Management Policy was updated to include funding arrangements, a standards document and a service level agreement for UQnet. To support the requirements of the policy to maintain UQnet for core sites, a budget was allocated from the Capital Management Plan. 2003 funding supported upgrades in locations across UQ including: SBS Education, SBS Faculty office, SBS Psychology, Human Movements, Dental School including the Library, Chemistry, Hawken, Chamberlain and Old Computer Science Building. Additional fibre connections between buildings were also installed, increasing network capacity between buildings and improving redundancy.

LEFT: Hewlett-Packard ProCurve Switch used to interconnect traffic from each of the blue cables.

BELOW: Wireless connectivity provides the UQ community with a more flexible working environment.



Focusing on Customer Service

The first point of contact at UQ

Voice Operations continued to deliver a first-rate, efficient and friendly service as the first point of contact for The University of Queensland and its wider community in 2003. Voice Operations answered approximately 1000 to 1500 incoming calls per day to the main advertised number for the University and distributed these calls to over 10,000 University extensions. Requests varied from wanting to be connected to a staff member, to enquiring about donating a body for science, or bequeathing money to the University.

Voice Operations was also responsible for the Telephone Help/Voicemail Help line, booking centre for Conference calls, e-Reception for organisational units, Call Accounting processing and recovery, mail out of the bill for the whole of the University, processing Telephone Works Requests, PIN numbers, production and distribution of the Internal Telephone book, updating of the Contacts page for the University web page, Emergency Procedures distribution, hire of Conference Facility telephone, recovery and validation of Telstra/ AAPT telephone bills.

Voice Operations prides itself on its continued support role in the ever growing, ever changing face of The University of Queensland.

Miracle Worker: Bronwyn Cash

The UQ Staff Assocation 2003 Miracle Worker Award was presented to ITS' Bronwyn Cash by the Chancellor, Sir Llew Edwards in September. Congratulations Bronwyn.

Bronwyn is ITS' Human Resources and Finance Officer, and has been nominated for several awards throughout her three-year career here at UQ. In 2001 Noela Meier, Associate Director System Services, nominated Bronwyn for the Pride in Work Award and in 2003/2004 she was again nominated for this award by the Director, Nick Tate.

Bronwyn and her manager, both receive frequent accolades regarding her work performance. She is very much appreciated in ITS. In our Director's words, Bronwyn takes an obvious pride in her work coupled with an exemplary approach to customer service.

ITS best placed to manage your IT assets

At ITS, we provide an integrated solution for the management and service of your IT assets. We provide support, under Service Level Agreements (SLAs), at faculty, school and centre levels. In 2003 we supported 68 contracts through SLAs. One recent and significant SLA is a whole of faculty agreement with the NRAVS faculty. We assisted the faculty in consolidating servers and providing a more proactive desktop management environment.

We support any organisation within the broad UQ community. Clients who undertake a service level agreement with ITS receive priority service through the ITS Help Desk, and access to a wealth of knowledge and expertise. In many cases, an incident can be rectified over the phone. Service expectations are clearly outlined in the agreement, and review meetings are instigated to ensure that expectations are met.

There are many advantages to having ITS manage your facilities. You can focus on your core business while ITS manages your IT assets using best practice methods. We provide a continuity of service, unaffected by changing staff and leave requirements. Our service staff have a broad range of skills and experiences. ITS provides management reporting and review, which ensures your department's IT framework of desktop, server and networking technologies is closely aligned with your business requirements.

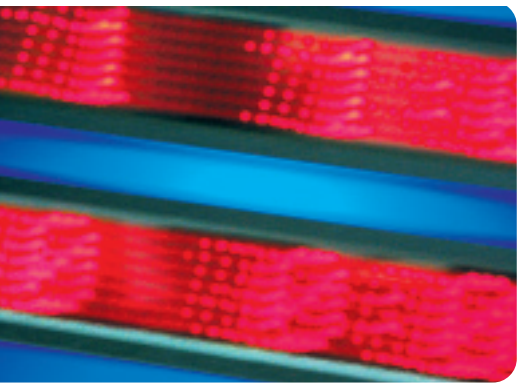
ITS has strong experience in the delivery of standard operating environments, like those for student computing laboratories, as well as in providing for unique organisational requirements. ITS has traditionally provided facilities management for networks, servers and workstations. You may not be aware that we also provide SLAs in firewall maintenance, application maintenance, database administration, backup support, and server and security monitoring.

ITS provides a whole of campus support agreement with the Ipswich campus and has done for over five years. During a recent management review of the Ipswich campus it was acknowledged that ITS continues to provide an efficient, highly robust and effective service and, in fact, the price per PC of supporting the site is well below the prevailing industry standard.

The question of whether or not to outsource management of your IT assets to ITS will depend largely on factors such as the frequency of use, how unique your requirements are and your in-house expertise. Even if your specialised individual requirements mean you are best placed to take care of your own IT assets, ITS may be able to assist you with some aspects, such as server hosting, off-site backup services, or database management. SLAs are tailored to suit individual organisational needs.

The ITS Account Management staff are available to discuss the delivery of IT services to your organisation.

(Photos from Left to right above): Roslyn Parker, friendly voice on the UQ Switch, Ben Tran, assisting clients on the Help Desk, Bronwyn Cash, Miracle Worker.



ITS a finalist in the iAwards

From more than 400 nominations nationwide, ITS was one of twelve selected finalists at the 2003 national AIIA awards held at the Sydney convention centre and one of three in the category of innovation. The AIIA iAwards are recognised as the cream of ICT industry awards with the right honourable Senator Richard Alston the patron of the event.

The nomination was for the Superview project, a three-dimensional network management system designed for the converged network infrastructure and operational requirements of the future. Superview, implemented at UQ in 2002, was a collaborative effort between The University of Queensland and NEC Business solutions Pty Ltd. The inset shows how the Superview system presents itself in action.

Pictured above with Senator Alston (centre) are ITS staff Claire Groves (left), and Graeme Wilson, Manager Voice networks (right). The Senator was discussing UQ IT activities at the time of the photograph.

IT training delivers

Train IT at ITS continued to provide a range of training to UQ staff, students and external clients during 2003. Courses provided were for professional development, as well as Industry IT Certification courses. Almost a hundred students enrolled in the Cisco CCNA course in 2003. Our VUE IT Certification testing centre is up and running and ITS is developing a better venue in 2004.

In addition to running these courses, Train IT is a Regional Cisco Networking Academy, sponsoring and supporting local Cisco Networking Academies (mainly secondary schools). In 2004 we will be running two conference/workshops for local Cisco Networking Academies.

Orientation Week

ITS took part in the 2003 O'Week activities at all campuses, even though the main event at St Lucia this year was a quagmire with the wet weather. The giant marquee planned for the Great Court was abandoned with Plan B swinging into action. ITS set up in Mayne Hall, where we were available to talk to 12,000 students in dry and comfortable surroundings.

ITS uses O'Week to promote ITS and UQconnect products and services. In 2003, we gave more than 3,000 students their UQconnect Internet set up CDs and other important information. IT Vendors on UQ's preferred supplier panel also took this opportunity to promote and display their products at special low prices negotiated by ITS for students and staff – another way in which ITS aims to deliver services for the University.

Desktop Support costs too much!

Supporting desktop systems can be expensive. Diverse applications, hardware, client requirements plus the inevitable security attacks typically increase the complexity and total cost of ownership.

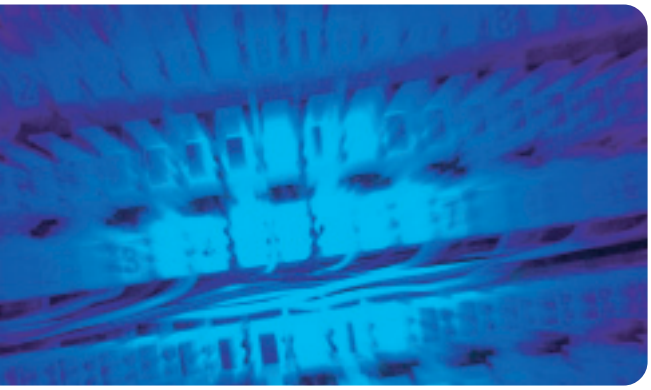
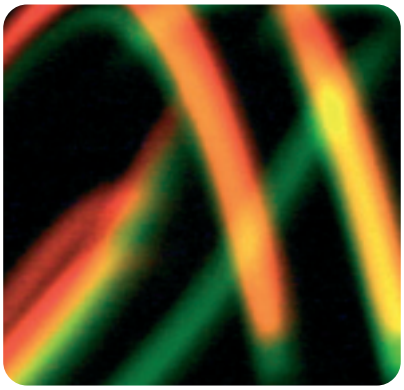
One of the ways in which ITS has simplified and improved the deployment of Microsoft patches to the desktop is through the use of a central software update service (SUS). This service has streamlined the process of keeping desktops up-to-date with the latest patches.

Another technique to reduce IT costs while maintaining or increasing the quality of service is to standardize. Those goals were important to the Faculty of NRAVS in their decision to move to a faculty-wide support agreement with ITS. The results have been positive and over the last year the Gatton campus has increased its standardisation in the areas of PCs, printers, software and operating systems. For more details contact Gavin Fuller, Manager Client Systems – Remote Campus (ext 11386).

These examples demonstrate some of the building blocks ITS is using to provide a managed operating environment (MOE) for our clients. The MOE will include services for keeping managed PCs up-to-date with patches and for deploying a standard range of applications to these PCs. We will pilot the MOE during 2004.
For more details contact Darren Wilkinson, Manager – Microsoft Services (ext 54018).

The good news is that reducing the diversity of PC hardware fleet and simplifying PC support through standardisation can benefit clients by potentially reducing costs while delivering better service.

Projects during 2003


Central Mail

During 2003 ITS built a UQ-wide mail system providing all UQ staff with an official email account. Staff can now access a free mail system using a variety of clients including two web clients, Outlook, Eudora, Netscape, Mozilla, Etourage, and more.
ITS also completed development of an administration tool allowing organisational units to administer mail accounts and distributions lists for their own staff. Presently ITS hosts mail for more than 30 'domains' and in 2004 more are expected to follow.

UQ Calendar

The new UQ-wide calendar system was introduced in 2003 with a web interface. Later in the year this interface was also made available via the staff portal. myCalendar provides staff and students with a university-wide appointment booking system. It allows them to book and manage both personal and group events, make calendars available to other people, subscribe to other UQ calendars (public calendars), and receive reminders of appointments. The calendar system can also be used to book resources such as rooms, and check staff availability before setting a date and time. This makes redundant the traditional time-consuming ring-around method. Staff have access to documentation including a user guide and guides on how to configure supported email clients. In 2004 ITS plans to release functionality allowing Outlook users to access the UQ Calendar direct from Outlook. Additionally we hope to release the GLOW mail and calendar client which has the Outlook look-and-feel but has the portability of Java software.

Staff Portal

Stage 1 of the staff portal was released in 2003 after extensive trials. Stage 1 includes two email clients connected to UQ Mail, a calendar client connected to the UQ Calendar, myInformation for important UQ announcements, myContacts, myLinks and others. An extensive launch campaign has been developed for February 2004. my.UQ has now grown from an average of 70 users online at any one time to an average of 1,500. In 2004, in order to accommodate future growth, and to improve reliability, my.UQ is being moved to the new server farm with load balancing. This will further increase reliability of the service and allow more timely servicing of equipment with minimal impact on the user base. Other possible enhancements expected in 2004 include access to UQAPS, a myFiles application to access files on network shares and a timesheet application.

Infrastructure Upgrade

The Infrastructure Upgrade Project was initiated to refine and expand the design of UQ's central services to improve business continuity.

The overall design goal of this project is to provide central services using a tiered approach. A modular service design improves security by grouping service components with similar security requirements into zones, and combining the same components from different services together for more effective use of equipment.

While the existing central services effectively catered for some disasters, this project takes that resilience to the next level.

To achieve the aims of the Infrastructure Upgrade Project, a distributed design incorporating failover firewalls, failover load balancers and campus clustering was developed for the Prentice and General Purpose North 3 Buildings.

The design process began by identifying relevant services, determining their level of importance and specific requirements for business continuity.

The services were then broken down into components, which were analysed for current pros and cons, current platform and dependencies.

Based on research into industry best practice, vendor recommendations and the current implementation, a design was developed balancing cost effective hardware and the appropriate level of resilience.

ITS is currently working towards setting up the machine rooms and network before moving Mail, LDAP, web and UQAPS to this distributed environment.

eLearn Tender

In 2003, a decision was made by the eLearning Working Party to tender for learning management software. This decision was prompted by WebCT changes in their product offerings and pricing structures. The eLearning Working Party had decided prior to this change to take the opportunity to look to the market again to select an eLearning application for The University of Queensland using a more in-depth selection process than the original selection of WebCT. Criteria were developed and a tender document was sent out in July 2003. The evaluation process was still underway at the end of 2003 with a decision to be made in 2004.



A number of teams were setup for the evaluation.

1. ITS support Team: ITS staff who assisted in the evaluation of business aspects of the tender and administration.
2. Business Group: Representatives of TEDI, Library and Faculties
3. Technical Group: Current eLearning Operations Group
4. Steering Committee: eLearning Working Party – Chair: Professor Margaret Gardner

The tender included the following evaluations:

- Evaluation of the tender document against detailed criteria
- Presentations
- Designer Evaluation & Integration Considerations
- Referee Checks
- Costs and workloads including evaluation of pricing, staff training requirements, student training requirements, conversion, supporting services from suppliers, software support, software installation, integration, administration, desktop configuration, archiving and hardware requirements.

Implementing IT Best Practices

The ITS "Sustainability Initiative", commenced in 2003. The purpose of this programme is to renew ISO9001 quality accreditation in 2004, implement IT Best practice process, through using guidelines developed in the IT Infrastructure Library (ITIL), and to implement information security standards. ITS staff have found the quality process of reviewing and documenting operations within and across groups of benefit, providing forums for discussion and improvements. Many ITS staff have had training in IT Best Practice principles of ITIL and ITS is organising training for other IT staff at the University. Workshops have also been undertaken in both ITS and other organisational units on security standards. 2004 will see further developments in these areas.

40 years of Information Technology Services

The University of Queensland recently celebrated more than 40 years of information technology. We take this opportunity to highlight some significant achievements over the years.

1962

As a result of the initiative of Professor Sydney A. Prentice, a General Electric GE-225 Computer was installed under the direction of Mr. R.E. Kelly, the first Computing Officer at UQ. The formal name of the Unit was The University of Queensland Computer Centre. The GE225 was in regular use until it was decommissioned in 1977 and presented to the Queensland Museum.

1965

Staff of the Computer Centre offered the first formal qualification in computing technology in Queensland and one of the first in Australia. This was the Post-graduate Diploma in Automatic Computing. A second formal course, the Postgraduate Diploma of Information Processing was offered in 1968.

1968

Following tender, a dual processor multiprogrammed PDP-10 was delivered by Digital Equipment Corporation. It was ordered to meet growth of 30% pa and represented a new approach of “time sharing”.

1969

The Department of Computer Science was established with Professor G.A. Rose as the inaugural Chair. The Computer Centre was transferred from the Department of Electrical Engineering to this new department. Three full time programmers were employed and 16 remote terminals for interactive time sharing were installed on the PDP-10.

1970

The Computer Centre became a separate entity and Professor Rose continued as Director.

1972

Mr Alan Coulter was appointed as the first full-time Director responsible to the Vice-Chancellor and later to the Deputy Vice-Chancellor. Policy matters were dealt with by the Computer Centre Executive Committee.

1973 – 1974

The Centre’s scope of operations increased to provide services to the newly established Griffith University. Student admission processing, initially known as the Joint Admission Centre, later became QTAC.

1975

University Senate approved the name “Prentice Computer Centre”. The first remote job entry batch station was installed at Griffith University allowing clients to submit card decks and receive printouts from the PDP-10 without travelling to St Lucia.

1976

Further remote batch stations were installed and connected to the DEC PDP-10.

1978

A Digital Equipment Corporation PDP-10 KL-1090 Computer was installed. A total of 170 remote terminals were now connected to the PDP-10s.

1979

A Mini/Micro Support Group was established to assist Departments.

1980

Report of the Vice-Chancellors Committee to Review the Provision of Computing Resources (The Holmes Committee Report) was submitted to the Vice Chancellor. Personal computers began to make an appearance at the University.

1981

The first DEC VAX System 11/780 was installed.

1982

The PDP KL1090 System was upgraded to a dual processor configuration. MICOM circuit switching and DECNET packet switching systems were upgraded. By the end 1982 there were 500 communications lines connected to the Centre operating at transmission speeds from 300 bps to 9600 bps. Gateways to external networks were installed providing access to CSIRO, other Australian Universities and to North America and Europe. An experimental Local Area Network (ETHERNET) operating at 10million bps was installed late in the year.

1983

A Computervision CAD/CAM system for computer aided design, as well as improved plotting and printing facilities and a phototypesetter were installed. Hardware and software services were extended to support 16 bit micro-computer systems. Tender and tender assessment, in conjunction with Griffith University, were undertaken to replace the DEC KA-10.

1984

An IBM 3083 System was installed. Griffith University contributed capital funds to reserve 12% of capacity for its own use. The DEC KA-10 was decommissioned after 16 years of service.

1987

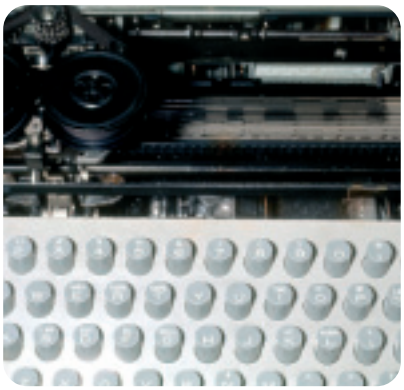
A DEC 8550 computer system was installed to replace the DEC PDP KL-1090 system.

1988

A three year old IBM 3081 processor system replaced the IBM 3083 providing additional processing power and disk space. The Centre made a major contribution to the development and operation of the Univations Pavilion at World EXPO88.

1989

The Director (Mr Alan Coulter) was seconded for two years to establish the new University Development Office “Downtown”. Mr John Noad (Deputy Director) was appointed as Director 1990.



1991

The Audio Visual Department was transferred to the Prentice Computer Centre resulting in a name change to The Prentice Centre. A major contract for the redevelopment of the Queensland Tertiary Admission Centre (QTAC) system was undertaken by the Centre. Access to the Network infrastructure was not in future to be charged to departmental users and revenue lost was to be replaced by central funding. The first QUESTnet Winter Workshop was co-hosted by UQ and JCU and held at Townsville.

1992

The Centre's Technology Shop became fully operational (Mr Danny Smith was the first manager). The DEC PDP KL1090 was retired. UQ hosted the 1992 AARNet Networkshop which was attended by over 400 people from Australia and overseas.

1993

A Cray Y-MP Supercomputer was leased to replace the IBM 3081. A MASPAR parallel high performance computer was relocated from the Department of Electrical Engineering. SERT (Security Emergency Response Team) was established as a joint operation by UQ, QUT, and Griffith Universities. SERT was admitted to the Forum of Incident Response and Security Teams (FIRST). 48 dial-in modems were installed. The new Television Unit studios and offices opened in the Prentice Building.

1994

SERT was renamed AUSCERT following the award of a contract to provide security services to AARNET and to avoid confusion with the US based CERT. The Prentice Centre was totally responsible for the operation of AUSCERT.

1995

A Silicon Graphics Power Challenge Supercomputer was installed to replace the CRAY Y-MP to provide approximately 10 times the processing capacity of the Cray. A GDC ATM switch and Wellfleet Backbone Concentrator nodes were installed to provide significant increase in the UQ backbone network bandwidth. The Centre managed the upgrade of links to QUT and Griffith to 34Mbps point to point microwave. New Cisco routing equipment was installed at the Queensland hub within the Centre. The link to the Gatton Campus was upgraded from 2Mbps to 34Mbps. Mr Alan Coulter retired as Director of The Prentice Centre in December.

1996

DEC Alpha Stations were purchased as the new standard platform for Central Network Services to the university. 180 dial-in modems were now installed.

1997

Graham Rees and Jennie Perry-Smith were appointed co-Directors.

1998

A review of Information Technology at the University recommended changes to the way technology was handled at UQ and led to the formation of ITS. The Silicon Graphics Origin 2000 supercomputer was installed.

1999

Nick Tate became the Director of ITS.

UQ Museum of Information Technology

The UQ Museum of Information Technology (previously called "The Prentice Computer Museum") was established in 1989. It was reviewed along with other University Museums in 1996.

By the year 2000 the display was in need of refurbishment. The Director ITS established an Advisory Committee chaired by Professor Gordon Rose. Following reports from Professor Rose, the Director ITS decided that the museum should be assessed having regard to the "Guidelines for the Management of Museums and Collections" approved by University Senate as HUPP 8.20.1

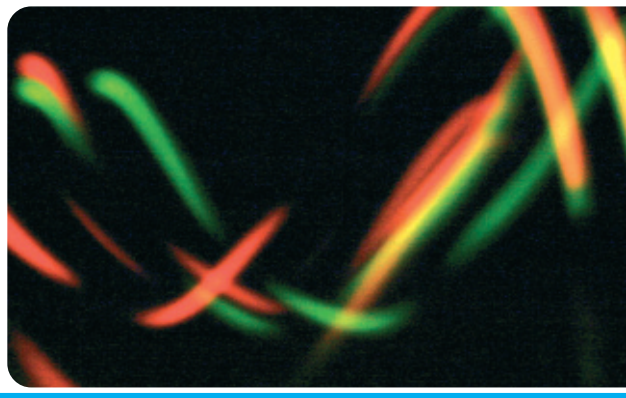
The study was completed in 2003 and in December of that year Professor Rose advised that the conclusions were endorsed by the Advisory Committee.

The "Report on the UQ Museum of Information Technology" 30 October 2003 covered the following:

> *Mission Statement; Establishment of the Museum; Review and Recognition; The Need for Refurbishment; Change of Name; Advisory Committee; Relationship with Other Organisations; The Collection now and in the Future; Strategies for Future Development; Space Requirements; Policy and Standards; Endorsement of the Australian Computer Society; Organisation and Administration; Funding; Disposal.*

The UQ Museum of Information Technology has a range of significant artefacts covering computing and communications equipment, software, computer games, engineering drawings, technical manuals and photographs. Items from the Museum have been provided for external displays including a touring exhibition by the Queensland Museum. A major thrust in the development of the UQ Museum of Information Technology will be to enhance the community services role of the University.

The most critical requirement is an allocation of suitable space. The Operations Section of the Property and Facilities Division has assisted ITS with a preliminary survey of possible sites. The Director ITS has these under consideration and following a more detailed assessment of availability and suitability a submission will be made to the Space Committee of the University.

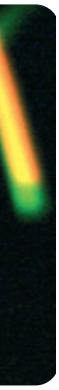


UQconnect, Growing with you

UQconnect delivers Internet services to the UQ community. For UQ organisational units this involves providing Internet access via the network or dial in from home, interstate or overseas as well as providing website hosting services.

UQconnect Internet services are designed to support the teaching, learning and research of the University as well as providing additional services and ongoing relational links with the wider community including staff, students and alumni.

UQconnect makes every effort to deliver quality services that befit a leading university and we strive to grow and adapt to meet the changing business needs of our organisation. We have delivered a number of new and improved services throughout 2003.



Pizza, slices the traffic

In 2003, a fixed price model was introduced for the charging of AARNet Internet traffic, thereby providing a fairer system as well as the opportunity for organisational units to calculate their costs, and project their expenses in advance. The traffic usage information in Pizza allows organisational units to isolate their Internet usage by subnets. This information is updated every four hours. Pizza also contains historical usage information from January 2002.

Access when you're far away

Many UQ staff travel overseas and interstate for work purposes, and need to access their email and UQ files while away from the office or home. To meet this need UQconnect introduced Global Access which allows UQ staff to dial in locally to connect to the University from across the world.

Secure remote access

The security of the University's network (UQnet) is paramount. UQconnect has introduced a virtual private network (VPN) service, which provides UQ staff with a secure connection to UQnet when accessing from insecure locations off campus. The VPN involves encrypting data before sending it through the public network and decrypting it at the receiving end.

Introducing Broadband

Our demanding work environment means that we require access to information faster and more efficiently, and sometimes we need this access from home as well as from work. To meet these needs, a tender was developed inviting responses from external organisations for the supply of broadband services to UQ. The tender sought to enable UQconnect to deliver high speed Internet connections for staff working from home, as well as providing services to external clients. As UQconnect is the University's own Internet Service Provider it was decided that a quality reliable service was required to support the work of such an organisation. Following tender evaluation, in late 2003 a contract was negotiated with AAPT for the provision of ADSL broadband services to UQ. In January 2004 UQconnect released ADSL broadband services for UQ Organisational Units, with external ADSL services for staff, students and alumni following early in the year.

Managing UQ accounts

UQ's Internet service needs have grown significantly over the past years, to include network access, dial in access, broadband access, and soon to be released wireless access. As a result of these changes, along with a greater need for Organisational Units to better manage their costs and recoveries, a tender was developed to invite external organisations to provide solutions to our changing Internet account management requirements.

Responses to the tender were evaluated and it was found, significant implementation work would be required to adapt any external system to interface with existing UQ systems. Fortuitously, new technologies were also emerging that allowed ITS to develop new systems and modify some existing systems in order to satisfy our current needs, and deliver this more cost effectively.

Implementation of the new Internet Account Management system will include facilities to improve the allocation, reporting and management of Internet traffic usage. Organisational Units will be able to appoint their own administrators to manage Internet access for their staff, as well as allocate and change download allowances, generate new passwords for staff as required, amend billing details and view usage for their units.

Changing student passwords

UQ students often require new passwords to be regenerated out of business hours. To satisfy this need a system known as 'Web PrISM' has been adapted to allow Library staff and other authorised users to provide password changes to students and staff.

Fighting spam

At UQconnect we are taking a proactive role in stopping and 'fighting' spam. Several initiatives have been implemented to combat these problems. Spam filtering tools cannot always determine between legitimate and illegitimate emails, so we introduced the running of headers for Spam Assassin and 'Spam and Open Relay Blocking System' (SORBS) on incoming emails. This allows staff to determine the levels of spam filtering they wish to use. Spam filtering guides are available for UQ staff.

One modem number to dial

To improve dial in Internet access for staff and students, UQconnect consolidated its modem banks. This means that there is now just one dial in number for each location, St Lucia (3300 8100), Gatton (5466 2333) and Ipswich (3813 8238).

A Family Friendly IS

UQconnect is pleased to announce its participation in the Internet Industry Association (IIA) Family Friendly seal program. This means that UQconnect complies with the IIA Codes of Practice that are registered with the Australian Broadcasting Authority. This initiative particularly recognises how UQconnect assists families to protect young people from problems associated with the Internet.

Our Plans for 2004 . . . Launching Broadband

ADSL broadband was introduced in January 2004 for UQ organisational units, enabling staff to access the Internet and University files much faster from home. ADSL can download files at speeds up to 1500kbps, compared with 56.6kbps through dial in connections. This service will also be available to staff, students and alumni purchasing accounts for their own use, and is available on a national scale.

Improved Traffic Management

During 2004 we are introducing new systems that will allow you to track Internet usage by user as well as allowing registered administrators to manage the Internet allowances and password generation for staff. This will allow organisational units to have greater control and management of their Internet traffic usage.

Better Web Hosting Services

During 2004 UQconnect will introduce several new web hosting services that better suit the changing needs of our business.

Discounts for UQ staff

From 2004 UQconnect is extending its discounts and special privileges to UQ staff as well as students who wish to purchase an Internet account for their own private use.

Security

AusCERT is an operational arm of The University of Queensland and is the national Computer Emergency Response Team for Australia and a leading CERT in the Asia/Pacific region.

AUSCERT is Australia's IT Security leader

About AusCERT

AusCERT services a range of members throughout Australia, New Zealand and the Asia-Pacific region through the provision of computer security and incident handling advice. It handled over 57,000 incidents in 2003.

AusCERT, which began its operations in 1992, is a member of the Forum of Incident Response and Security Teams (FIRST), an international organisation of over 100 CSIRTs throughout the world.

AusCERT in review

2003 was a year of notable highlights and achievements for AusCERT and the work and relationships that have been developed will bring new opportunities and challenges during the year ahead.

The second annual AusCERT IT Security Conference (AusCERT2003) was highly successful and entrenched its reputation as the premier IT security conference in Australia. During the year AusCERT delivered commitments to the Commonwealth government to operate both the National IT Incident Reporting and Alerts Schemes, which were launched in May and June respectively.

In 2003, AusCERT was elected chair of the Working Group for the Asia-Pacific CERT (APCERT) helping to build ties with, and develop a Memorandum of Understanding for, cooperative relations among the CERTs of the Asia-Pacific region. The formal arrangements that now exist through APCERT are benefiting AusCERT directly and enabling us to provide incident response services beyond our national borders.

New training courses have been developed including for Australian Federal Police investigators. Through AusAID initiatives, AusCERT is delivering training to help develop CERT capabilities within emerging Asian economies. The 2003 Australian Computer Crime and Security Survey, produced in collaboration with the AFP and State police has been a popular source of data and analysis about computer crime and security issues within Australia.

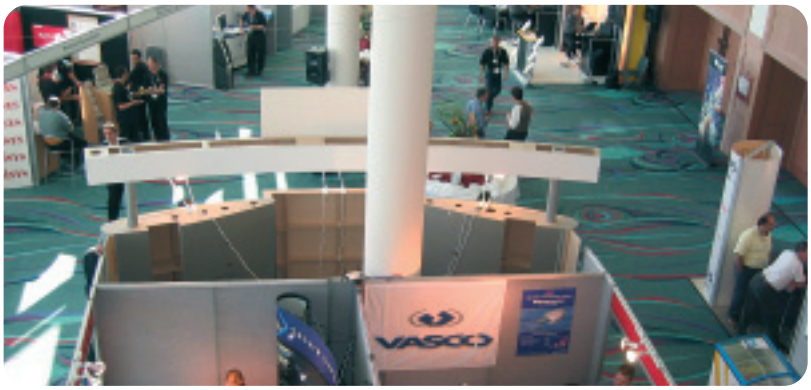
AusCERT's work in all these areas and its regional and international engagements have been critical to enhancing its profile and importance as the national CERT.

AusCERT2003 Conference

AusCERT2003, the AusCERT Asia-Pacific IT Security Conference was held in May at Royal Pines at the Gold Coast. It was the second year of the conference and was again a great success. *The main purpose of this conference is to raise the profile of AusCERT in the IT Security space.* 520 delegates attended the conference, a 40.5% increase from 2002. The conference consisted of business and technical streams covering the issues of IT security with international and national speakers of world class standing in the security and related industries. Accolades received by delegates included "*One of the best conferences I have attended with interesting topics, well organised events and professional interaction/networking";*

"An enjoyable and very beneficial conference for anyone involved in e-business security issues"

The success of this conference is attributed to the conference organisers, AusCERT, ITS and UQ staff who assist with the speaker programme, organisation, IT and AV facilities and marketing. Expectations for the 2004 conference are high.



Development of a new IT Professional Certification Scheme

The International Systems Security Professional Certification Scheme (ISSPCS)

In 2003, the International Systems Security Engineering Association (ISSEA) began overseeing the implementation of a global and open certification scheme for IT and systems security professionals that addresses the shortfalls of traditional IT security certifications by founding the scheme on essential principles of security.

Development of the scheme is being jointly undertaken by Information Technology Services (ITS) at The University of Queensland (UQ), Electronic Warfare Associates Australia (EWA-Australia) and the Australian Computer Emergency Response Team (AusCERT).

The ISSPCS program is founded on essential principles of security and focuses on security from a process and discipline perspective.
This approach is unique in that the ISSPCS curriculum explores the application of each security process in various conditions and across each discipline ensuring that security activities are not conducted in isolation from the enterprise's goals and objectives and the environment in which it operates.

Developers will be seeking input from a wide section of the user community in order to achieve a certification that is credible, comprehensive, cost-effective, international in scope, and genuinely open.

The first section of the scheme's "Theoretical and Practical Knowledge Base" (TPKB) has undergone an initial round of public review.

To oversee the academic validity and technical currency of the scheme, an independent Academic Board of leading IT Security industry professionals from around the globe has been formed. The board includes representatives from Australia, the USA, Canada, the UK, Singapore and China from both the public and private sectors.

The first stage theory examinations for ISSPCS are likely to commence around June this year.
More information about the scheme is available from URL:
http://www.isspcs.org.au

Information Security and IS18

IS18 is the Queensland State Government Information Standard 18, which The University of Queensland is required to comply and on which it is externally audited. This standard presents 10 mandatory principles for implementing security measures commensurate with the information's value, business significance and sensitivity, as well as providing disciplinary and incident handling guidelines and information classification controls. In 2003 a survey was sent to Organisational Units and a number of workshops were held with IT staff around UQ. An analysis of the results of these surveys has shown that varying levels of information security exist across UQ, and improvements are required in respect to overall security, standards and operational processes. In 2004, a security review will be completed by ITS, the implementation of which will assist in IS18 compliance as well as better information security at UQ. Further workshops will be held in 2004. IS18 is not just a standard for IT staff and, as such, a session on information security has been included in Legislative training.

IT Security @ UQ

The major IT security incidents at UQ in recent years, including 2003, have involved worms and viruses.

For instance, in response to some of the major worm outbreaks including the MSBLASTER worm and derivatives, ITS strengthened network perimeter security as well as implementing various measures to monitor and report on network activity aligned with worm activity. Reports were made available via the Web and proved to be very useful for IT support staff in identifying infected systems.

Within UQ, measures were implemented to contain the worm in areas that had significant infestations.

ITS has embarked on several initiatives in the area of IT security. These have ranged from improving the security awareness of UQ staff, particularly those involved providing support, to implementing various measures to reduce the impact of major security threats.

ITS is also implementing various services to assist IT support staff to ensure systems have the latest operating system and application software patches as well as antivirus updates.

A major activity of the past year has involved ITS and AusCERT performing an extensive review of IT security at UQ, including the evaluation of various technologies, an examination of relevant policies, processes, and procedures, and the ongoing development of a UQ security architecture and associated recommendations.

Also Noteworthy

Supercomputing Power

Two new SGI Altix 3000 computers were installed in March 2003. These systems bought the new Intel ia64 processor and Linux operating system to the UQ and QPSF High Performance Computing communities. Operation of these new systems was ramped up during the year as software for the new platform was released.
Additional scratch disk for the Altix system was installed in August, followed shortly by the Networker backup software and the OpenPBS batch system. The installation of the "imagic" application for an IMB research group led to high utilisation of the systems. Additional popular HPC applications continue to be released for this platform. 2003 also saw the installation of an Uninteruptable Power Supply (UPS) to facilitate controlled shutdown of the HPC systems and storage following any future loss of electrical power.
The end of 2003 also saw ITS involved in preparations for housing the new ACcESS supercomputer operated by the Earth Sciences group.

VideoVision

ITS' video production house, VideoVision, produced over 50 separate productions this year for teaching, research and promotion. The major productions included a contribution to a research project conducted by Human Movement Studies and Cricket Australia. Special Effects software was used to create novel video segments to test how a batsman predicts what type of ball has been bowled (pictured below right).
The Bright Minds project saw VideoVision record another four studio interviews with illustrious scientists and a series of public lectures which were packaged for sale to high schools. VideoVision staff also helped Journalism students produce a weekly TV show which was broadcast on Briz 31. Links were recorded in our fifth floor studio and the on-air master assembled in our digital edit suite (pictured below centre).
The CMTE commissioned a video to showcase their award winning Universal Dragline System. This technology, worth millions in licence fees, dramatically increases productivity in open cut mining operations. P&H MinePro, the commercial retrofitters of the UDS, impressed with CMTE's video, requested their own version to promote their services internationally (pictured below left).
Other productions included videos for the opening of the Queensland Biosciences Precinct and the Teaching and Learning and Research Weeks Awards.
Dubbing services were, as always, in high demand. We can now easily output to DVD and this is often the delivery medium of choice. Encoding video to various digital formats for WWW and CD delivery is also popular.

Server Tender

During 2003, ITS on behalf of UQ, joined with QUT in a tender to appoint vendors to a panel to supply servers to both Universities. The servers were to be able to run both Windows and Unix operating systems.
Several staff from other UQ organisational units assisted staff from ITS during the tender process. The process began with a Request for Information and successful vendors from this were able to reply to the Request for Offer.
Five vendors were appointed to UQ's first Preferred Supplier Panel for servers. They are Acer, Coretech, Dell, HP and IBM. Appointment to the panel is for a 3 year period based on 1 year appointments and at least annual reviews. As with the desktop and laptop Panel, Organisational Units are using this panel to make their procurement more effective, more efficient and less expensive.

PSA Panel Reviews

Reviews of the desktop/laptop Panel were undertaken over the first half of 2003 and the panel members were all reappointed with a further 1 year contract until July 2004. As July 2004 will herald the end of the 3 years of UQ's first IT desktop, laptop, PDA, printer and scanner Preferred Supplier Panel, it will necessitate a tender for these products in the first half of 2004. From mid 2001 to the end of 2003, purchases for this Panel totalled approximately $25,000,000. Conservatively, this is a saving on the pre Panel procurement of at least $1,200,000.
The two vendors on the AV PSA Panel (Advanced Video Integration and VideoPro) were reinstated at the end of 2003 for another year after review by the three Brisbane universities.
Seen in the light of budget savings through cheaper pricing, better pre- and after-sales service, closer relationships with vendors allowing on-campus technical updates, seminars and joint projects, and more efficient procurement practices, the PSA Panels have clearly been a success and now have university-wide usage.

Looking ahead

Managed PCs will be up to date and secure

ITS will expand UQAPS in 2004 to include a fully managed desktop PC. The managed PC will automatically be kept up-to-date with patches and updates to ensure that it remains secure. A range of applications will be able to be deployed directly to these managed PCs, which will complement and enhance the applications currently delivered via Citrix.

Redeveloped Website for ITS

Clients will be able to find more information online, faster and more easily, following the implementation of a redeveloped ITS Website in 2004. Focus groups were conducted in 2003 to determine client needs and assist with ideas in developing the premier IT website for UQ. We thank UQ staff and students for their time and good suggestions. We're sure to build a good website to meet your needs.

PABX Replacement

The telephone is one of those ubiquitous services that we all take for granted. We expect it to work, in all conditions, no matter what, whether we want to make a call to the next room or across the world. Yet very few people ever think – or have need to think – about the infrastructure "behind the scenes" that allows these calls to be made.

The core of our existing PABX – a NEC 2400 system – was installed way back in 1990, and has given excellent reliability and performance throughout that time. Various upgrades and additions have been made in order to continue to provide an advanced level of service to the University users, and smaller "satellite" PABX units have been added at sites such as Ipswich and QBP. However a fourteen-year-old PABX is slightly past its prime, and it is clear that in order to install a replacement unit before serviceability issues occur, work on selecting a new PABX must begin immediately. This will be a major undertaking for the University, and for the end user, our goal is always for it to be "business as usual".

Traffic Metering for All!

One of the most requested features relating to Internet traffic is the ability to measure the usage by each user. With the University having some 60,000 registered users and using some 200GB of traffic each and every day, this is not a simple exercise. Solutions to date have been able to give this in special circumstances – such as by routing Internet access via the UQ Proxies. However, a system to provide individual metering for any traffic has been in test with several University units for some months.

The software has been mostly developed within ITS, however the challenge is to find appropriate network devices that will provide the fine level of detail required by network administrators, whilst still allowing the network to operate at speeds of 10Gbps. The solution should be identified early in 2004, and implemented during 2004.

Changes to AARNet

AARNet – the Australian Academic and Research Network – is the ISP for the majority of Australia's universities, providing a truly national network. The mainstay of AARNet's services to date have been 155Mbps links between each state capital, with interconnects to domestic carriers and overseas sites. During 2003, GrangeNet – GRid And Next GEneration Network – connected to UQ at 1Gbps, providing connections to other GrangeNet member universities in Sydney, Melbourne and Canberra.

Charging models for the two networks are at opposite end of the spectrum – AARNet charges for all traffic (with no other fees), whereas GrangeNet charges a single subscription fee and all traffic to GrangeNet members is then free.

There may be some shake-ups to these charging models in 2004, and at the moment, the outcome is difficult to predict. Recent developments mean that AARNet will become a 10Gbps service, which dramatically increases the volume of traffic and the complexity of recording usage at these speeds. UQ can expect to benefit from the new service in the first half of 2004, which may also cause us to re-think our internal cost recovery policies.

Videoconferencing more powerful

2004 will see the introduction to ITS of Access Grid technology, which allows researchers to hold multi-site meetings via enhanced video-conferencing. Often described as "videoconferencing on steroids," the Access Grid is potentially a very sophisticated academic research tool. It will allow easier and more open lines of communication between participants at different sites by the use of a video and audio system comprised of multiple projectors, cameras, mixers and computers. With the use of a high speed network the quality of delivery will be significantly enhanced.

Nick Tate, Director, ITS has been working in association with Deputy Vice-Chancellor (Research) Professor David Siddle and Professor Bernard Pailthorpe (Advanced Computational Modelling Centre) to develop a University position on this emerging technology. Preliminary work has indicated that multiple Access Grid Nodes will be required in the University with at least one proposed to be established in each Faculty.

ITS will enable use of this collaborative communications technology across the University Network and provide high level advice to faculties and schools wishing to use the Access Grid concept. The ITS Access Grid should be flexible enough to meet the needs of high level (University Executive) meetings.

ITS Vision & Mission

ITS MISSION
What we want to be

To be the IT solution provider of choice enhancing the reputation of the University of Queensland through:

- Meeting the needs of our customers
- The seamless provision of services
- Leadership in IT, and
- Strategic partnerships

ITS MISSION

Reaching the Vision

We will provide centralised, integrated services that enable the University of Queensland to enhance its competitive advantage as a leading research and teaching university.

We will ensure customers have a positive and satisfying experience:

- interacting with highly skilled and customer focused staff, and
- using quality services and products
- by understanding the customer and addressing their needs.

We will attract, develop and retain talented staff. We will encourage outstanding performance, innovation and leadership, and value staff effort. We will create an environment where staff want to work.