

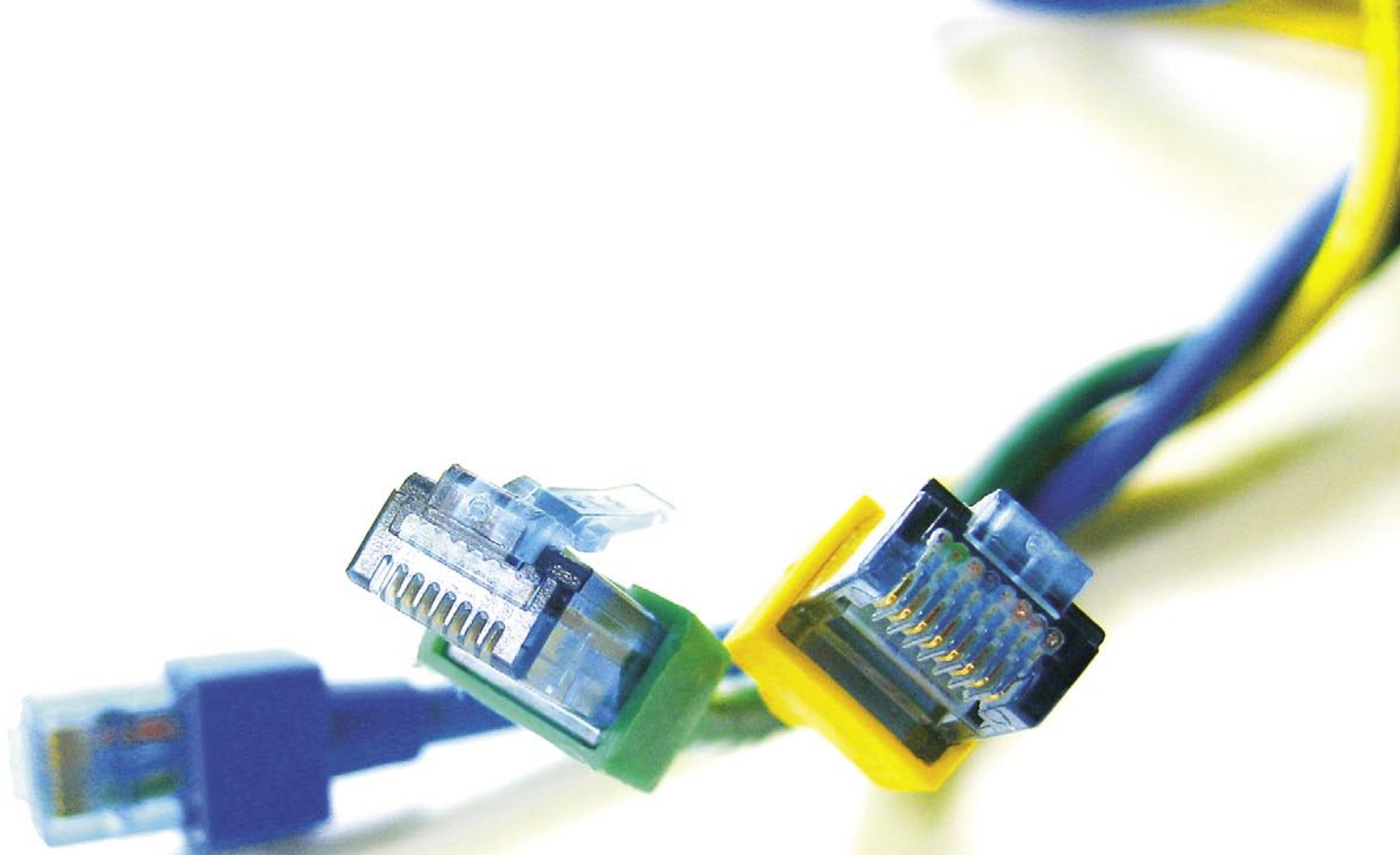


THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

ITS Report 2004 - 2006 »

REPORT ON THE ACHIEVEMENTS OF INFORMATION TECHNOLOGY SERVICES





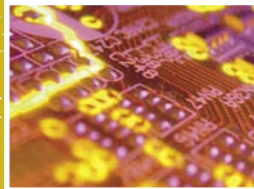
ITS Report 2004 - 2006 »



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director's report »



The last three years have seen significant change and substantial achievement for ITS, with many initiatives coming to fruition and many innovative services being offered

During this time we have seen the development and implementation of a wireless network spanning six University campuses and sites and allowing access for staff and students to University resources without being tied to a specific location. A further major expansion is now being planned to not only extend the coverage of the network but also to integrate fully with services such as Eduroam which will allow staff and students the opportunity to connect to resources at several hundred universities around the world.

The University's own Internet Service Provider (ISP) UQconnect, which is a part of ITS, has continued to expand and provide a full service to the UQ community. All staff and students now automatically have dial-up access from anywhere in Australia and the free student Internet service includes this dial-up, together with unlimited access to both UQ's network and other research and education networks around the world. All students also receive an amount of free commercial Internet access, can freely access the wireless network and can upgrade to fixed or wireless broadband links at reduced rates.

Good support is essential to the successful deployment of any technology and over this period, the ITS Help Desk has continued to provide support to the whole UQ community for an ever growing range of services. At the same time, the Help Desk's availability has substantially increased to 86 hours a week, 14 hours a day during the week and 8 hours a day at weekends. A new Help Desk management system has recently been implemented to support this increasing activity and groups from around the University have also decided to switch to the new system.

There has been a substantial focus on the support of teaching and learning with a new learning management system, Blackboard being very successfully implemented and integrated with both the University's portal, my.UQ, and the University wide login system. Other eLearning activities have included the implementation of plagiarism detection software, TurnItIn, piloting of a learning content management system and the development of an electronic course profiles system. There has been no less activity in supporting the physical environment for teaching and collaboration with the development of an innovative new Collaborative Learning Centre (CLC) in the Sir James Foots building. This exciting new centre, designed and implemented by the Teaching Technology Support (TTS) group within ITS, includes new concepts of space management combined with an ability to instantly reconfigure the space and the deployment of advanced IT and audio-visual technology; and because the CLC can be managed remotely, it has been cost effective for it to remain open for extended hours. A further CLC is being developed at Gatton and a project to develop an Advanced Concept Teaching Space has also been initiated.

"Significant attention has also been paid to the support of research in the University."

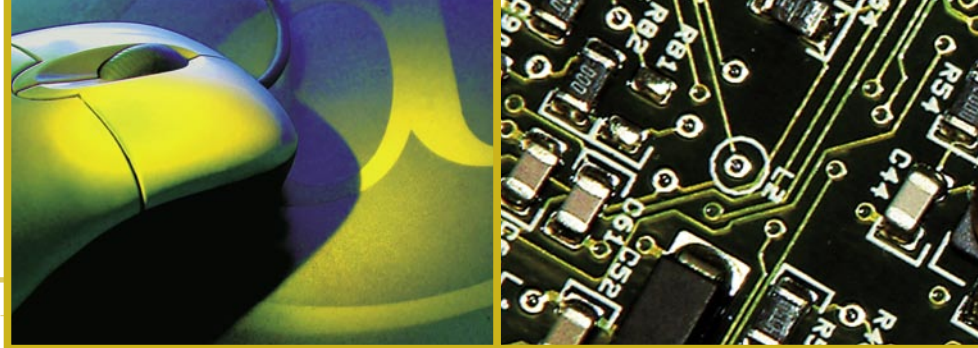
ITS already supports the High Performance Computing activities of the Queensland Cyber Infrastructure Foundation (QCIF) and provides advanced high speed networks. The last three years, however, have seen a major increase in capacity to the academic Internet. A plan is now being implemented to substantially increase the support of High Performance Computing (HPC) within the University with the formation of a new HPC support team in ITS. The development of a sector wide Public Key Infrastructure for researchers throughout Australia and New Zealand has also taken place. A highlight has been the winning of \$1.23million in

funding from the Commonwealth Government for the MAPS and e-Security Framework projects. I have also been involved, with the Commonwealth Government and other universities, on a range of committees seeking to support advanced networks, eResearch and National Research Infrastructure across the Higher Education and research sector.

Corporate Systems have seen big improvements as well with a substantial project to move all corporate applications, such as SI-net, Aurion and Masterpiece to a new clustered environment that spans both the Prentice and GP North Data centres. This new environment not only provides many times the computing power of the previous one but also simultaneously holds all data in both places in case a disaster should make either data centre unusable. Many of the central systems run by ITS for the University now adopt the same approach, with systems such as the web hosting service and the directory and login service now being split between data centres.

This architecture is also used by the new central email system for staff, perhaps the largest implementation project yet undertaken by ITS. A new email system, using Microsoft Exchange, has been implemented on 18 servers split across the two data centres with the aim of supporting 10,000 staff accounts, with high performance and disaster recovery protection. Migration to the new system is well under way with thousands of staff now able to use the many new features of the system. Future developments will integrate with Exchange to provide collaboration tools linked to a new phone system and a document management system. Desktop support is important as well and the development of a Managed Operating Environment (MOE) has allowed us to deliver better services at lower cost to the increasing number of organisational units around the University who have chosen ITS to provide all their IT support under a Service Level Agreement (SLA).

The period, 2004 to 2006, has seen a major expansion of both the capability and the activity of AusCERT (Australian



Computer Emergency Response Team), also a part of ITS. AusCERT is active in 27 countries across 5 continents, has been recognised as Australia's National CERT and has recently signed a "whole of Government" membership agreement with the Commonwealth Government which means that all departments and agencies are now AusCERT subscribers. AusCERT is now one of only two groups globally who can deliver the highest levels of CERT training and, as a result, AusCERT has delivered training for APEC, most recently to the CERTs in Mexico, Chile and Peru. Meanwhile, the AusCERT conference,

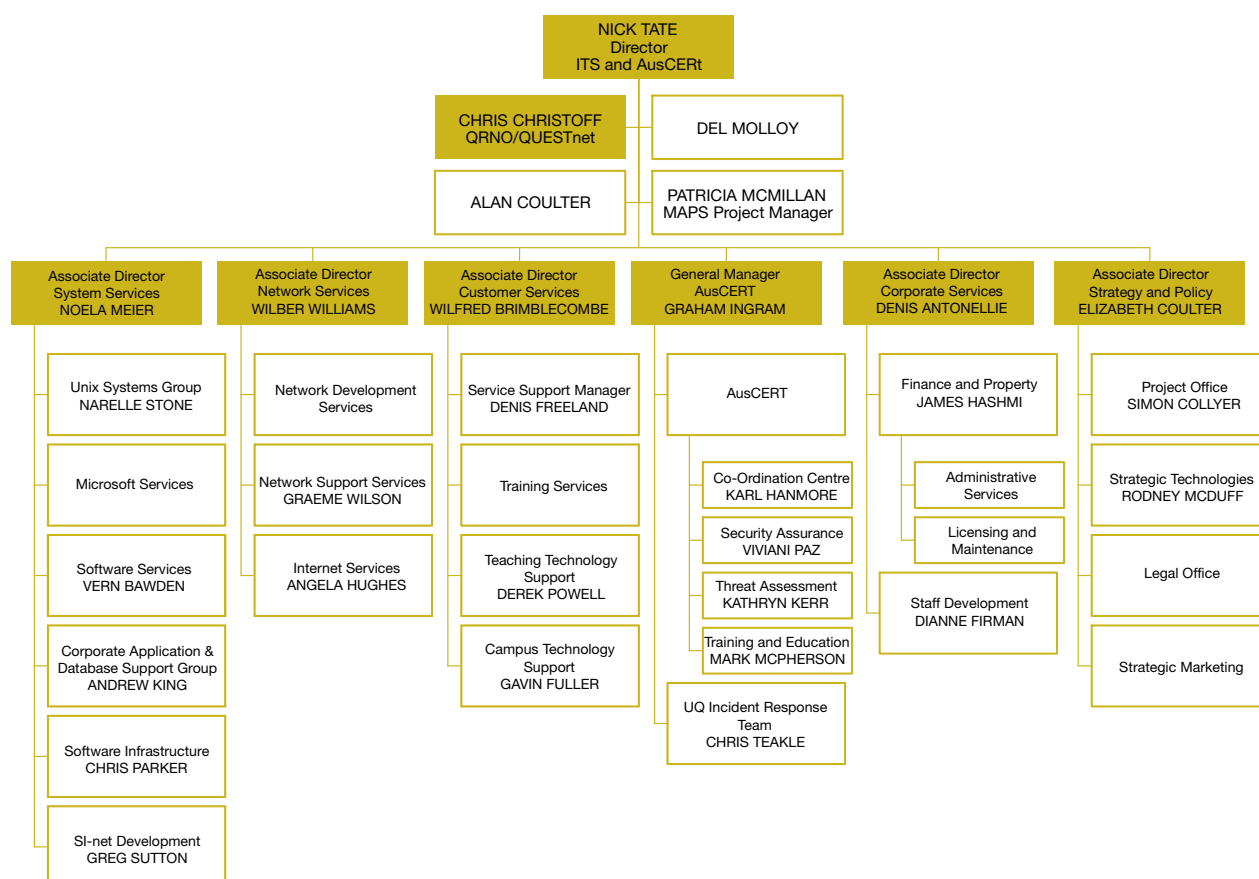
now in its fifth year, is the biggest IT Security conference in Australia with 1,100 delegates and 63 sponsors, and is attracting truly world class speakers. Recently, with the help of the Strategic Technologies Group, AusCERT has been seeking to help the Higher Education and Research sector, through running the pilot of a Public Key Infrastructure for the sector and helping to establish a sector wide Trust federation. Finally, these two groups together have developed a global certification scheme for IT security professions, ISSPCS, for which we gained an international award.

There have been many other successful activities within ITS, such as the UQtrainIT establishment of a Cisco Network Academy and the work that is routinely undertaken with our colleagues in CAUDIT, QUESTnet and the QRNO (Queensland Regional Network Organisation). None of these many initiatives to benefit students, staff and the wider community can be achieved without dedicated teamwork from many people and I would like to thank all the staff in ITS who have helped make 2004 to 2006 such a success for the division.

Nick Tate

Director, Information Technology Services

Information Technology Services



meet our management team »

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WILBER WILLIAMS Associate Director, Network Services

Responsible for all data and voice network functions. These include development and maintenance of the campus backbone data network, the wider area network which links UQ campuses together and the PABX and phone network. Also responsible for UQconnect, UQ's Internet Service Provider.

GRAHAM INGRAM General Manager, AusCERT

Responsible for the operations of AusCERT (Australian Computer Emergency Response Team) Australia's National CERT, and UQ's Incident Response Team (IRT).

NICK TATE Director, Information Technology Services (ITS) and AusCERT

Responsible for all the services provided by ITS, including those provided by AusCERT, UQconnect and UQtrainIT. This includes a full range of IT services, from advanced networks to software development as well as responsibility for Australia's National CERT (AusCERT), a large Internet Service Provider (ISP) in UQconnect and a growing advanced training capability focussed on IT professionals (UQtrainIT). Nick is also chair of both the Council of Australian University Directors of IT (CAUDIT) and the Queensland Regional Network Organisation (QRNO) and is a director of the AVCC (Australian Vice Chancellor's Committee) owned company, Higher Ed Systems Pty Ltd. He is also President of the Academic Board of the International Systems Security Professional Certification Scheme (ISSPCS) and is currently Vice Chair of the Australian Computer Society (ACS) in Queensland.

CHRIS CHRISTOFF Strategic Advisor, ITS

Responsible for various cross-team initiatives affecting ITS and its sections, such as process review, liaison to research and funding bodies, ISO review preparation and ITS Review preparation. Executive Officer, Qld Regional Network Organisation (QRNO) Executive Officer, Qld University Education, Science and Technology Network (QUESTnet). These roles involve administrative activities, project work, liaison with various sectors including universities, government and industry, and the organising of conferences and workshops.



ELIZABETH COULTER Associate Director, Strategy and Policy

Responsible for leading Strategic Marketing, Strategic Technologies and the Project Office, the development of ICT policies relevant to IT services across the University and ITS operational guidelines, reviewing of management information, monitoring the ITS budget, benchmarking, maintaining ISO standards and ensuring legal requirements are met. Other responsibilities include Secretary of the eLearning Working Party and IT Project Manager for eLearning.

WILFRED BRIMBLECOMBE Associate Director, Customer Services

Responsible for much of the frontline customer activity of ITS, including the service centre, the Help Desk, operations, account management, campus technology support and teaching technology support, which designs, implements and supports audio-visual and IT technology for teaching spaces.

NOELA MEIER Associate Director, System Services

Responsible for server systems management, software infrastructure, database administration, software and web development. Responsibilities also include software development for SI-net.

DENIS ANTONELLIE Associate Director, Corporate Services

Responsible for management of personnel, staff development, property, finance, administration and purchasing as well as providing a repair facilitation service. This includes responsibility for producing financial accounts, ITS recruitment, and technology purchasing for ITS and many parts of the University.

about ITS »



About Information Technology Services (ITS)

Information Technology Services provides a wide range of IT services to over 36,000 students, 5,500 academic and general staff, and 7,000 users in the wider community. ITS pro-actively supports the administrative, teaching, learning and research needs of its customers in a rapidly changing environment.

ITS is the division of The University of Queensland which manages core networks and IT infrastructure for the whole University. Internet access to the National University Network (AARNet), which connects most universities and CSIRO in Queensland is managed by ITS on behalf of the Queensland Regional Network Organisation (QRNO). UQ's Supercomputer and many of its largest servers are also operated by ITS.

ITS is also its own Internet Service Provider (ISP) called UQconnect, which provides both retail and corporate services to a growing user base. Through UQconnect ITS delivers national dial-up, ADSL, wireless connectivity and web and mail services to the UQ community.

Within ITS is the internationally recognised network security group, AusCERT, which provides Internet security services throughout Australia and New Zealand. AusCERT is the national Computer Emergency Response Team (CERT) for Australia and its clients include all Universities in Australia and New Zealand, many banks, ISPs, and government departments at federal, state and local levels.

In addition to providing direct services to over 65,000 users, ITS has a large number of facilities management agreements covering desktop system support, server administration, network support and audio-visual services delivery. ITS administers UQ's extensive telephone network, which includes over 11,500 fixed lines, and cordless, wireless and fax connections. A central switchboard also operates at the St Lucia campus.

ITS also has its own video production house which produces video for teaching and research, offers videoconferencing, maintains audio-visual services for all centrally controlled lecture theatres, and offers a range of audio-visual equipment hire services.

About IT at UQ

As for any large organisation, IT is diverse at The University of Queensland.

Some IT services are provided centrally for UQ as a whole, while other IT services are managed by organisational units individually. Information Technology Services is UQ's primary division for providing IT services. Within UQ, IT support is provided in a number of different ways. Central services, such as the campus network, the phone system, the main email and calendar system, internet access and support of the audio-visual technology in central teaching spaces are generally provided by ITS. For other forms of IT support, there is a choice. Some organisational units contract ITS to provide their support under a Service Level Agreement (SLA) and others recruit their own staff and run this aspect of IT, themselves. Although the main UQ IT Service Desk will always try to help if it can, you should ascertain whether you are supported directly by ITS or by a local support team.

ITS Vision

"To be the IT solution provider of choice when in a competitive market and to provide central services which enhance the reputation of The University of Queensland through:

- Best practice in customer service and service provisioning
- The seamless provision of services
- Leadership in IT, and
- Strategic Partnerships"

ITS Mission

"We will provide centralised, integrated services that enable The University of Queensland to reach its mission to create a community dedicated to achieving national and international levels of excellence in teaching, research

and scholarship, one that makes significant contributions to the intellectual, cultural, social and economic life of the State of Queensland and the Australian nation.

We will ensure customers have a positive and satisfying experience:

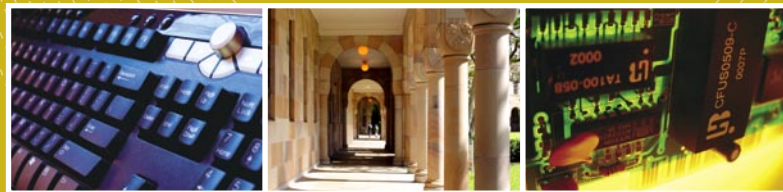
- Interacting with highly skilled and customer focused staff, and
- Using quality services and products
- By understanding the customer and addressing their needs

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"

research »



ITS gives significant attention to the support of research at UQ. These pages describe ITS' initiatives and projects which provide that support

Engaging with Commonwealth Government and the Research Community

Research is currently undergoing a period of substantial change with the advent of both an eResearch programme sponsored by the Commonwealth Government and the likely implementation of a research quality framework (RQF). Each of these changes has significant implications for the level of information technology support that will need to be available to enable world class research.

These changing directions have been recognised by ITS, and increasing resources are being devoted to support this activity. In particular the Director of ITS, Nick Tate, has engaged with the Commonwealth Government and the research community through involvement on the following key committees:

- NCRIS Platforms for Collaboration Reference Group (DEST)
- Research Quality Framework IT Working Group (DEST)
- eResearch Coordinating Committee (DEST)
- eResearch Coordinating Committee Technical Working Party (DEST)
- Board of Management of the Australian Research Enabling Environment (ARCHER) Project (DEST, Systemic Infrastructure Initiative Project - SII)
- Board of Management the Dataset Acquisition Accessibility & Annotation e-Research Technologies (DART) Project (DEST, SII Project)
- Chief Investigator and Chair, PKI Project Steering Committee (CAUDIT), MAPS and eSecurity Framework

The National Collaborative Research Infrastructure Strategy (NCRIS) is a major initiative under the Government's Backing Australia's Ability - Building our Future through Science and Innovation. It aims to provide researchers with access to the infrastructure and networks necessary to undertake world-class research. This initiative is funded by the Commonwealth Department of Education, Science and Training (DEST).

The Research Quality Framework is a DEST initiative to develop the basis for an improved assessment of the quality and impact of publicly funded research and an effective process to achieve this.

The role of members of the DEST eResearch Coordinating Committee was to develop strategies for improving awareness and engagement of Australian researchers in e-Research, and to act as champions in their spheres of influence. The e-Research Coordinating Committee has established a Technical Working Party to inform it about technical aspects arising in implementing the e-Research strategic framework.

The Australian Government allocated \$15 million under the Systemic Infrastructure Initiative (SII) to support greater collaboration between researchers, both domestically and internationally as part of an ongoing commitment to strengthen innovation and improve research outcomes. The Dataset Acquisition, Accessibility and Annotation e-Research Technology Project (DART) was a \$3.2m initiative that investigated how to manage issues surrounding very large data repositories. The ARCHER project is a \$4.5m initiative that will build on the architecture and prototype software developed by the DART project to adopt a common information management architecture and infrastructure across the many data intensive research areas.

With \$170,000 funding from Grangenet, with the backing of the Department of Communications, Information Technology, and the Arts (DCITA), the Council of Australian Directors of Information Technology (CAUDIT) PKI Project steering committee oversaw the PKI (Public Key Infrastructure) project to develop a trust framework and common PKI policies

and standards for secure collaboration between research groups.

High Performance Computing – Leading Edge in Supercomputers

The last two years have seen significant advances in High Performance Computing technology available on campus. These changes have benefited UQ's research community significantly. The leading edge Itanium2 systems installed earlier evolved into an effective High Performance Computing platform. Improvements in the compiler software and availability of High Performance Computing applications saw these systems realise their promise and performance research computations.

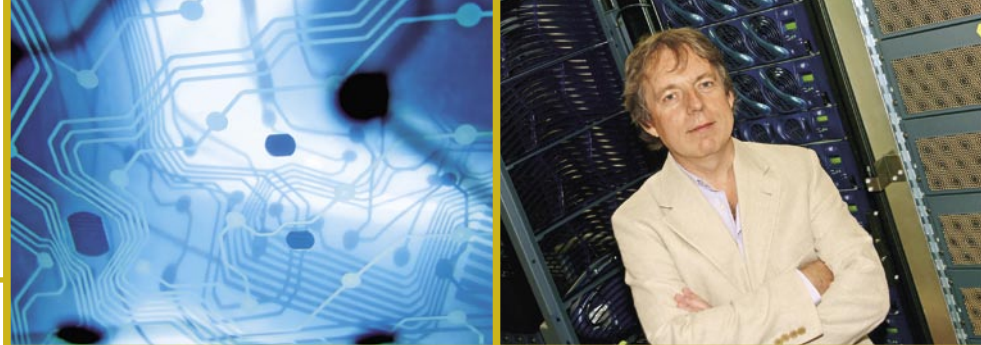
In January, the High Performance Computing Origin computer, the most recent of the SGI MIP/Irix systems that have served the University High Performance Computing community for several years, was decommissioned.

The Origin was deconstructed, with most CPUs going to augment the High Performance Computing system at QUT, while some components returned to service as a High Performance Computing Data Management server. The importance of Data has grown for the High Performance Computing community.

In early 2004, High Performance Computing data storage capacity was upgraded to a total 120 Terabytes of tape. New fast Raid systems and SAN infrastructure make that resource available to multiple systems. High Performance Computing Data is now being managed for a number of research centres and for QPSF partners and well as traditional High Performance Computing system clients.

Increased desktop computer performance has seen an increase in the direct use of central High Performance Computing licensed applications on the desktop. Several license applications are now available to researchers in the Engineering and Maths domains.

A High Performance Computing Support Unit is being setup in ITS and will be located in new accommodation in the GP



South building. Provided under a service level agreement to Professor David Siddle, Deputy Vice Chancellor, Research, this unit will provide support for the increasing needs of the High Performance computing environment at UQ.

Secure Communication for CAUDIT

Collaboration between Australian Higher Education Institutions, research institutions around the world, and global research partners is key. Cross-disciplinary research is increasingly important between intra- and inter-institutional groups but mechanisms for communication between such groups are often insecure. Insecure communication methods are of particular concern for research because of the need to protect intellectual property.

To address this issue, AusCERT is running a pilot project to implement a Public Key Infrastructure (PKI) for Council of the Australian University Directors of Information Technology (CAUDIT) members. This is part of a larger initiative under the Strategic Infrastructure Initiative as announced by DEST in January 2001, Backing Australia's Ability - An Innovation Action Plan for the Future (BAA).

The purpose of this project is to implement the secure access, authentication and authorisation of researchers who access services and infrastructure across global networks. It seeks to establish an E-Security framework which will integrate two types of security systems, PKI and Shibboleth, to foster collaboration and enable the secure sharing of resources and research infrastructure within Australia and with international partners. The project will leverage off existing work in both areas, build on the advantages of these different systems and create a platform to enable the secure sharing of resources for a research infrastructure.

The initial phase, funded by GrangeNet and with support from the Department

of Communications, Information Technology and the Arts, is a proof of concept. It involves testing technologies and writing policies and procedures to foster interoperability within the research community in higher education sectors in Australian and New Zealand, and possibly overseas. Future phases include taking PKI into production and aligning it with Shibboleth, which has been funded through the Systemic Infrastructure Initiative (SII).

Whilst PKI has been used quite extensively overseas, it is at the very beginning of its implementation in Australian universities and this presents an opportunity to establish a common standards set for interoperability between universities. This is preferable to a major exercise in retro-fitting a standard onto existing implementations.

eSecurity Framework Project

The eSecurity Framework Project enables secure sharing of resources.

In 2005, the Minister approved the funding of \$649,000 to UQ for the eSecurity Framework Project with the Director, ITS as Chief Investigator. The Project is being undertaken by various sections of ITS including AusCERT and the Strategic Technologies Group.

The eSecurity Framework project is a DEST funded project which is part of a larger effort from the Australian Higher Education Sector with support from AusCERT, CAUDIT, the Australian government and other institutions to develop an environment in which Universities can collaborate with each other at low cost and low risk.

This project builds on the existing CAUDIT PKI and MAMS projects to establish a production Public Key Infrastructure (PKI) for the University and Research Sector, based on the standards developed in the existing project, and to develop a pilot federation which leverages

the PKI infrastructure in aligning the trust arrangements between institutions to support the implementation of Shibboleth across the sector. It also seeks to lower the barriers of entry to PKI using open source software. The project outcomes would be to enable the secure sharing of resources and research infrastructure across the domestic sector and with international partners.

The eSecurity Framework project is funded by the Australian Commonwealth Government's Department of Education, Science and Training (DEST), through to June 2007. The funding has been provided through the Systemic Infrastructure Initiative (SSI) as part of the Commonwealth Government's Backing Australia's Ability - An Innovation Action Plan for the Future (BAA). The eSecurity Framework is part of the collective Managed Environment for Research Repository Infrastructure (MERRI) set of projects. The University of Queensland is the lead institution for this project; other members being AusCERT, Macquarie University, CAUDIT, APAC and AARNet.

The aim of this project is to develop and ultimately implement a PKI for CAUDIT universities (which include universities in Australia, New Zealand, Fiji and Papua New Guinea) and the CAUDIT research community. To achieve this goal the project team is working closely with other projects such as Meta Access Management System Project (MAMS) and Middleware Action Plan and Strategy (MAPS). A phased approach is being used in order to test interoperability and find out issues regarding PKI enabled applications prior to production implementation.

MAPS Project

The MAPS Project is a roadmap for middleware services.

In 2005, the Minister approved the funding of \$566,693 to UQ for the Middleware Action Plan and Strategy Project (MAPS), with the Director, ITS as



Centre: Martin Nicholls, Specialist Systems Programmer,
integral member of the High Performance Computing team

Chief Investigator. The Project is being undertaken by various sections of ITS including AusCERT and the Strategic Technologies Group.

UQ is the lead University for MAPS. Funding for the project is provided by the Department of Education, Science, and Training (DEST) as part of "Backing Australia's Ability – Building Our Future Through Science and Innovation". Other partners in the project include Macquarie University, ANU, Monash University, CAUDIT, CAUL, and AARNet. The main aim of the project is to develop a strategic roadmap for middleware services, which will identify the services that need to be offered and describe how they ought to be offered, in order to provide ongoing, effective support for research and higher education within Australia. The roadmap should have broad consensus across the Australian research and higher education sector.

The project is funded through until June 2007. Patricia McMillan was hired in April 2006 as project manager. Stage 1 of the project – gaining input on the project approach from stakeholders and steering committee members across Australia – is complete, and the project plan was approved by the steering committee at the beginning of July. Stage 2 is in progress. This stage involves gathering information and positions for the strategic roadmap, including a stock take of middleware services currently provided in Australia, the needs of the research community, existing service models that could be used to offer sustainable middleware services and views from domain experts and the wider community. A draft roadmap will be disseminated widely in the first half of 2007, with the final roadmap submitted to DEST in June 2007.

UQconnect: Providing Internet Services to Enhance Research

AARNet enhanced

At the beginning of 2005, Internet access at UQ was transformed with the upgrade to the AARNet3 network. This upgrade changes how the University is billed for Internet traffic but importantly it includes significant increases to speed and access to a worldwide network of research institutions. The University's capacity has been increased from a 100MB to a 10GB link, which means research data can be transferred at significantly faster rates. Along with the upgrade we now have unlimited access to most universities in Australia (except Bond and Notre Dame) and many research and education institutions throughout the world. With unlimited access to these networks staff at UQ now have some of the best resources for extensive research collaboration around the world, giving us a leading edge with research outcomes.

Online Profiles of UQ Researchers

The UQ Research Solutions system, developed by ITS, allows researchers within UQ to publish an online profile about themselves, including their research interests, achievements, projects they are involved with or are supervising, and their publications. Since being finished in late 2005, Research Solutions has been adopted by the majority of schools and research units across UQ.

UQ Research Solutions provides access to the diverse and excellent expertise and experience of individual researchers and groups of researchers across The University of Queensland. It is a single focal point for expertise and technology.

UQ Research Solutions promotes UQ's research activity to a global audience and demonstrates innovation and cross-disciplinary links within UQ's research programs. It also facilitates the identification and contact of individual

and/or groups of UQ researchers that have expertise in a specific field.

This site makes available detailed research profiles and evidence of expertise at various levels. It incorporates school and centre research profiles, profiles for individual researchers, research project and publication details, and details of available research facilities.

The integrity and timelines of information on a website such as this is of paramount importance. Data in Research Solutions is compared against and updated from the University's corporate information systems daily. These data links also avoid data double-entry and ensure that the maintenance effort required is kept to a minimum. For example, the member lists of Schools' and Research Centres' will be updated daily from the personnel system, as will individuals' contact details. Publications and research projects will be automatically published as soon as they are entered into the Office of Research and Postgraduate Studies database. Updates to School and Centre data (e.g. new Head, location or contact) and structural changes within the University will be captured by a data feed from the UQorg database.

Access to data from the corporate information systems does not restrict the freedom of individuals or their Heads to customise their public profile. All researchers are able to augment the centrally-fed information, or to suppress any detail which they do not wish to see on their website. A robust administrative interface allows Heads of Schools and Centre Directors to exercise as much or as little editorial control as they choose.

The interface provides multiple communication mechanisms including a comprehensive search engine, browse lists and downloads of print-formatted documents. Visitors to Research Solutions can also subscribe to the site and be kept informed about new developments at UQ in their specific areas of interest.

teaching & learning »



There has been substantial focus on the support of teaching and learning. The online learning system and physical learning centres which deploy the latest in IT and audio-visual technology demonstrate ITS' commitment to supporting teaching and learning

eLearning at UQ

ITS has been working closely with TEDI, the Library and academics across UQ to assist in delivering, supporting and maintaining solutions that meet UQ's teaching and learning needs.

In 2004, Blackboard was selected as the new online learning management system for UQ, replacing WebCT. This system was selected after a tender evaluation by academics from across UQ, and was chosen for its ease of use and for the ability to enhance functionality through "Building Blocks" (programs or plug-ins that can operate within the system architecture). This project was a collaboration between TEDI, ITS and the Library. Blackboard was piloted in summer 2004 and was in full production by Semester 1, 2005.

Other systems that have been implemented since Blackboard began supporting an enterprise approach to eLearning and eLearning systems are the Electronic Course Profile, managed by the Deputy Vice Chancellor Academic's Office, and plagiarism detection software called TurnItIn. Projects currently in progress are a pilot of the Learning Content Management System and ePortfolio, implementation of the Blackboard Community System for managing communities in the teaching and learning environment, and evaluations of collaboration tools and tools for recording in lecture theatres.

TurnItIn – Plagiarism Detection Software

TurnItIn, a type of Plagiarism Detection or text matching software, became available at UQ in Semester 1, 2006. It was implemented on the basis that plagiarism detection tools should be used primarily to educate students about appropriate citation. For example, students can use TurnItIn to educate themselves by submitting draft assignments. It is also a valuable tool for students because it protects their intellectual property and helps maintain the academic integrity and academic standing of their degree.

After selection of TurnItIn in 2005, ITS was asked to project manage the implementation of this software.

A project steering committee consisting of Academics, Library, Student Services, TEDI and ITS was formed. A pilot program to trial the use of the software began in Summer Semester 2005/06. The purpose of the pilot was to identify the procedures and processes for the use of TurnItIn and to integrate it with teaching activities in a live environment. TurnItIn went live in Semester 1, 2006 with the recommendations from the evaluation report implemented. TurnItIn is now available to all courses through Blackboard and guidelines for the use of TurnItIn were developed from an appendix to HUPP 3.40.12 – Academic Integrity and Plagiarism.

Feedback received from staff and students has been positive.

Learning Content Management System

In 2005, ITS ran a tender on behalf of the eLearning Working Party for a Learning Content Management System to further enhance the functionality of the UQ Learning Management System, Blackboard. A LCMS provides:

- A central facility for academics to store and update content, which is then automatically updated in Blackboard
- A hosting service for libraries of content, which may be shared within schools or between faculties
- A way to manage copyright or learning materials
- A way to easily find learning materials
- A student e-portfolio system

A product called The Learning Edge was chosen, and a pilot, project managed by ITS, was undertaken over Semester 2, 2006. The purpose of the pilot is to configure and review the system to determine its viability UQ's teaching and learning environment. Staff involved in the pilot included academics from four schools, technical staff from the Medical School, ITS, the Library, the Copyright Coordinator and TEDI. Based on a successful pilot, a full implementation of the LCMS is planned for Semester 1, 2007.

Left: Elizabeth Coulter, Associate Director, Strategy and Policy, Secretary of eLearning Working Party and IT Project Manager for eLearning

Right: Derek Powell, Manager, Teaching Technology Support, instrumental in the design and fit out of the Collaborative Learning Centre in the James Foots building

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Blackboard Community System Implementation

The Blackboard Community system, part of the Blackboard suite of products, enables Blackboard as a teaching and learning portal and provides a powerful and effective method of building distinctive web-based teaching and learning communities. It also provides a greater potential to introduce useful eLearning tools which integrate with Blackboard. The Blackboard Community System was purchased in Semester 1, 2006 and, after significant planning, ITS, together with TEDI and the Library, coordinated the implementation of stage 1 in Semester 2, 2006. The first stage enabled the customisation of the welcome pages, the introduction of tabs for staff, policy, Library and help information, and the ability to have community sites. Additional features will be introduced in 2007, including enabling information to be targeted based on Faculty.

Collaboration Tools

At the end of 2005, ITS and TEDI invited suppliers to present collaboration tools to academic and IT staff for evaluation. Several products were selected for trial. These included Breeze, Elluminate Live and Learning Object Campus Pack, the first two products being audio and visual based collaboration tools and the third being a text based collaboration tool. After a brief evaluation by academics of Campus Pack, TEDI was overwhelmed with requests for it. ITS is in the process of buying this tool. The evaluation of Breeze and Elluminate will continue until the end of Semester 2, 2006.

Podcasting

ITS is also in the process of evaluating requirements and systems for podcasting, in order to provide a solution that is easy to use, integrates with current eLearning systems and has appropriate security of information in place. A recommendation and guidelines is expected in the second half of 2006.

Electronic Course Profiles System

In a project undertaken for the Deputy Vice Chancellor (Academic), ITS has developed the UQ Electronic Course Profile System (ECPS). The ECPS project delivered a web-based system for developing, delivering and archiving all course profiles at The University of Queensland. It allows for easier management and revision of course profiles for staff, and provides students with consistent course information across Faculties. ECPS draws on existing authoritative data sources when available, with course coordinators and designers providing the teaching and learning information directly into the system. As the system aims to produce consistent course profiles across the University, flexibility was needed to accommodate the variety of teaching and administrative practices in the Faculties and Schools.

Electronic Course Profiles integrates navigationally with mySI-net, the Programs and Courses website and Blackboard, which enables current and prospective students to access both administrative course and learning-centred information. The system is designed to provide a user-friendly interface for academics to allow them to put together consistently formatted course profiles.

ECPS allows all Schools to meet current obligations in the provision of course details to students as set out in the Course Profile policy (HUPP 3.20.9). Those Schools that have already developed sophisticated electronic course profile systems are able to maintain their current level of service provision to students.

A pilot version was delivered at the end of 2005, and trialed by four schools (ITEE, English, Media Studies and Art History, School of Pharmacy, School of Agronomy and Horticulture in Semester 1, 2006. ECPS was fully operational by Semester 2, 2006. Now that the ECPS is fully operational, the Electronic Course Profile Project will move to gather feedback to inform the next phase of system enhancements. Feedback will be sought from staff and students who use ECPS to form the basis of the project's submission to the Deputy Vice-Chancellor (Academic) for system enhancements in Semester 1, 2007. The ECPS webserver will be upgraded in the near future to further improve system response times.

Technology Supports Teaching, Research and Promotion

Collaboration the focus of new Learning Centre

The audio-visual and IT design and fit-out of the exciting Collaborative Learning Centre (CLC) in the Sir James Foots Building in mid-2005 demonstrated the ability of ITS to provide integrated solutions to complex teaching and learning specifications.

Working from the requirements set out by TEDI and collaborating closely with Architects, ITS developed an entirely novel audio-visual and IT solution which actually enabled the innovative collaborative pedagogy required by the centre.

The CLC provides an environment that is clearly different from conventional lecture theatres, seminar rooms, or computer labs, while retaining elements of all. The unique multi-mode functions designed into the presentation systems enable academics to use sophisticated learning techniques with students without requiring elaborate set-up of the room in advance.



The concepts of space management within the rooms and the ability to instantly reconfigure the space within the room are unique in the University and possibly in the tertiary sector in Australia. The ability for the academic to move between seminar and group work (in break-out spaces) and then back to seminar mode without changing locations or physical movement of walls saves time and enables multiple learning styles within a single session. Uniquely it also enables full control and monitoring of five or more student groups by the lecturer.

Strong interest in the use of collaborative methods is evidenced by the participation of academics from widely differing disciplines, from Mathematics to Therapies. Formal surveys and informal feedback from academics and students has demonstrated that the facilities are quickly understood and customers can immediately come to terms with the way the equipment empowers the intended learning modes.

The computer installation also marked a new phase in remote management of IT systems. The CLC is managed without the need for any staff to be permanently located there. The "managed operating environment" applied to all of the 170 computers in the centre ensures high availability and enables special software requirements to be rapidly deployed for use in teaching.

Since completion, the design and functionality of the audio-visual and IT systems have received wide acclaim with groups (including a 15 strong delegation from the University of Melbourne) travelling from far and wide to study the centre.

Another collaborative teaching space is being built at Gatton and is expected to be completed in Semester 2, 2006. Other similar spaces are planned for the future including one in the new GP North Building 4 (GPN4).

Advanced Concept Teaching Space

In 2006, ITS has also been working on the concept of an Advanced Concept Teaching Space (UQ ACTS) which is intended to be built by 2007 in the GP North 4 building. This space will have the look and feel of a modern lecture theatre but will be fitted out with leading edge technologies such as systems that integrate with iPods or mobile phones, and individual touch screens for students. These will enable students to move through slides at their own pace, type questions to the lecturer, and access an automated translation service, as well as other services that will make the lecture experience more flexible.

Video Services supporting UQ

Through Video Vision TTS provides a video production service across the three realms of promotion, teaching material production, and support for research.

Teaching:

Video Vision provides a professional broadcast quality service to allow academics to produce teaching material. These materials often provide students with experience otherwise not practically possible (e.g. the handling of wild animals for veterinary science students). Some work produced over the past few years includes:

- Animal Handling (School of Animal Studies) - Animal Handling compilation videos including production of Handling Captive Wildlife recorded on location at Dreamworld
- Fitness Assessment Demonstration (Human Movement Studies) - demonstration of how to conduct a fitness assessment
- Mobility Assessment Demonstrations with patients prepared for Physiotherapy students
- Neurological Examination and Urinary Tract Imaging (School of Animal Studies)

- Audiology Assessment (Occupational Therapy)
- Clinical Process (Psychiatry) - studio lecture recording with inserted presentation PowerPoint slides

Research Focus:

Video Vision has created many special presentations for the research community. This includes one for CRC Mining which featured a compilation of their research work for the visit of a Chilean delegation. Chile is a huge market for mining technology and the video allowed Professor Mike Hood to quickly encapsulate the enormous breadth of the centre's research and technological developments as a "scene setter" to their meetings.

From a recorded plenary session at the Biohorizons E-Conference (First Year Human Biology Subject) in the UQ Centre attended by 800 students, Video Vision produced a DVD for international distribution for the School of Biomedical Sciences.

Other jobs included encoding of lectures recorded at the Winter School in Mathematical and Computational Biology for viewing via the Internet, and providing UQ research footage on DVCAM for inclusion in a promotion for the INORMS Conference.

Promotion and External Communication:

Promotional videos have also been developed for UQ, one of which was the opening of the ACRF Dynamic Imaging Centre for Cancer Biology. This was an opportunity for the University to show the latest technology in the fight against Cancer. The footage was available for distribution to TV Stations attending the opening.

student services »



ITS has been focusing more on improving the IT Services for students at UQ and providing more IT support for their studies. Initiatives ITS has introduced to assist students with their study included:

Improving IT Services for Students

Some of the things ITS has been working on include:

- The IT Tools for Students booklet, which was released in 2005 to provide students with a quick reference guide to the IT services available to them at UQ to assist their studies. It was sent to all students at the beginning of 2005 through direct mail. Following the success of the booklet, an updated version was published in 2006
- New ITS and UQconnect websites, which provide information through a more user-friendly interface and simpler ways to find content. These websites use UQ's web content management system, which means updates are quick and easy, so information is always up-to-date
- The free student Internet service which underwent a major upgrade in time for Semester 1, 2005, and now provides free dial-up access from most places in Australia for the cost of a local call
- Download allowance for students which increased to 150MB per month. Students also receive unlimited downloads from UQ, most Australian university websites, and many of overseas universities and research networks that does not count against their allowance
- Information sessions during Orientation Week, at St Lucia, Ipswich and Gatton. Hundreds of students attended these popular

sessions to find out how IT at UQ can support their study

- ITS staff met with students in the ITS tent in Great Court on Market Day during Orientation Week to answer questions and provide information about IT services at UQ. Around one thousand students collected their free UQconnect Installation CD, which allows them to set up their home computers for free dial-up access to their UQconnect Internet Service
- Monthly ITS stands at the UQ student union market that allow students to talk to Help Desk staff about UQconnect products and services

UQconnect – Providing Internet for Students

National Dial-Up

In keeping with its commitment to meeting the IT needs of all sections of the UQ community, ITS enhanced dial-up Internet services in 2005. As one of Australia's leading universities, with multiple campuses and students located throughout the country, the demands on keeping everything connected are high. All staff and students, no matter where they are located, require the ability to access Internet resources. So in 2005 ITS launched a national dial-up service, meaning staff, students and external customers can connect anywhere in Australia for the cost of a local call. This is a cutting-edge service for an Australian university attracting prospective staff and students. To complement this service, a national Help Desk number was also introduced to support customers of the national dial-up number.

Australia Wide Help when you need it

ITS has also increased our support services. Early in 2005 year we increased our Help Desk support hours to 10pm from 5pm, Monday to Friday. In July 2005 we extended support hours to include Saturday and Sunday from 9am to 5pm. Along with this we launched a new 1300 number that allows staff, students and external customers to call in for support anywhere in Australia for the cost of a local call.

More downloads, more space, more work

In late 2004 ITS we conducted a survey with students to gauge their opinions on Internet services at UQ. While the results were quite positive, students did raise areas for improvement. Among these were increased downloads with Internet access, and more disk space for storing files on-campus. Consequently in January 2006 we increased student Internet access to 150MB (from 80MB), which now includes unlimited downloads from most Australian universities, and many research and education institutions around the world. We also increased student disk space from 10MB to 100MB.

Free applications

As a long time partner of the University, Sun Microsystems has offered UQ students a unique chance to use some programs free of charge. StarOffice 7.0, an alternative to Microsoft Office, has been offered free to UQ students since January 2004. The response to this has been positive, with many students excited by the prospect of using a full-featured word processing program. To coincide with the release of UQ's new e-Learning program Blackboard in 2005, Sun further extended their offer to include Java. StarOffice 8.0, released in late 2006, is also being offered free to students.

Portable Computing program, smartphones and iPods

To provide easier purchasing for students and staff of IT technology, ITS has leveraged our strong buying power with vendors to provide heavily discounted laptops, Tablet PCs, PDAs, smartphones and iPods to students and staff. The computers come completely prepared for life at UQ. Launched with Hewlett Packard products in 2005, the Portable Computing program was expanded to include Apple notebooks and iPods in July 2006. Smartphones that are able to take advantage the UQconnect 802.11 wireless network and integrate with the new staff central email system are also available.

Left: Scott Sinclair, Senior Systems Programmer, Strategic Technologies, using the UQconnect Wireless Network

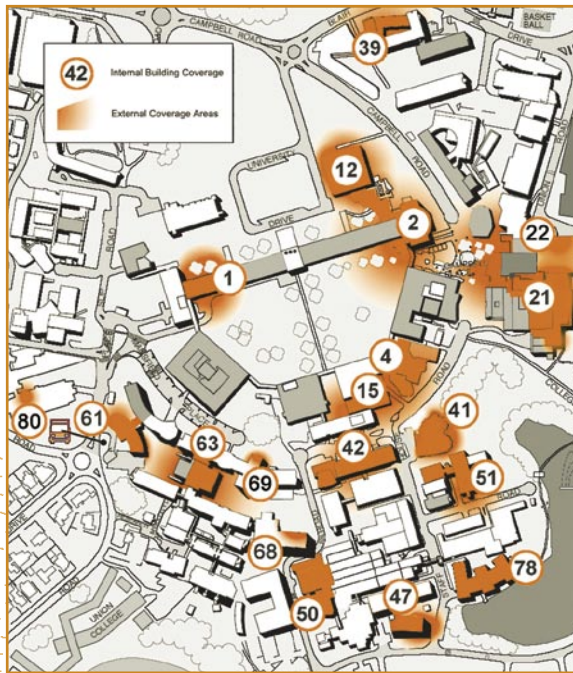
Middle: Angela Hughes, General Manager, UQconnect

Right: ITS runs free events such as sausage sizzles throughout the year to promote the IT services available to students

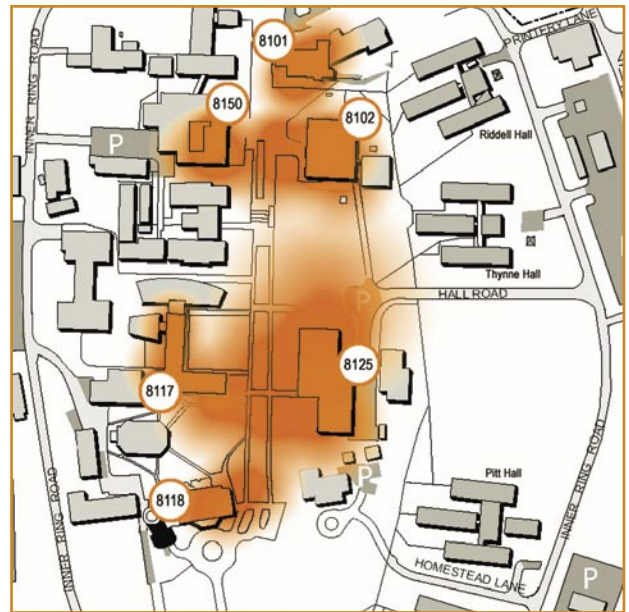


UQconnect wireless locations

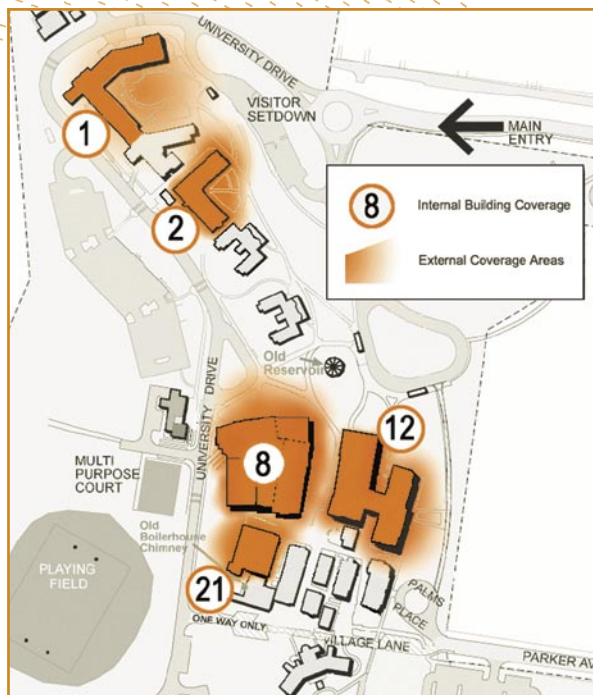
St Lucia



Gatton



Ipswich



Number of wireless base stations across UQ campuses

St Lucia: 163

Ipswich: 49

Gatton: 16

Hospitals: 8

Central Plaza: 12



Students go wireless

Ubiquitous connection is becoming increasingly important with the massive amount of research material found on the Internet and the need to continually access emails. 2005 saw a huge development in network accessibility for UQ students and staff with the large scale deployment of the UQconnect Wireless Network at St Lucia, Ipswich and Gatton campuses, along with the UQ Business School downtown. Although there had been some wireless networks in place at UQ, never before did customers have the ability to access online resources easily and securely, using their UQ Sign In from a multitude of locations around the University.

The rollout of the network went smoothly, with ITS delivering information about how to use wireless through several avenues. An Internet site was developed describing exactly how to set up computers, access maps, FAQs and how to 'get started'. UQconnect Wireless stickers were displayed around campuses to help educate staff and students about where wireless 'hotspots' are located. ITS also held official launches at the Ipswich and Gatton campuses that attracted substantial interest from the wider community and media.

Use of the UQconnect Wireless Network has been fast and problem-free, with hundreds of people online wirelessly every day from libraries, student labs, administration buildings, open areas and the ever popular coffee shops and refectories.

The network, accessible through laptops (with wireless cards) and PDAs, has a number of benefits for the UQ community. Students can take advantage of the network in classes and group work, and use their PDAs to browse the Library catalogue from the shelves. General staff can access the Internet during meetings to search for information, while academic staff can connect during lectures.

ITS is continually expanding coverage based on feedback from customers and increasing demand with new areas coming online all the time. A major increase in capacity was provided in time for Semester 1, 2006.

Wireless Launch

Launches were held for the UQconnect Wireless Networks at St Lucia, Gatton and Ipswich campuses in 2005. The Mayor of Gatton, Steve Jones, and Ipswich Mayor Paul Pisasale, both helped launch the wireless networks at the Gatton and Ipswich events held in June. These launches received coverage in the nationally-distributed Computerworld magazine, and significant local press and radio coverage.

Enhancements to Student Administration

ITS continued to support the SI-net and mySI-net Student System applications plus develop new enhancements to meet customer requests and legislative requirements.

The team developed a successful pilot with Centrelink to send student study workload information automatically to ensure accurate Centrelink payments. The system allows students to simultaneously advise Centrelink and UQ of changes in study arrangements.

Functionality was developed to automatically trigger emails to students on approval for supplementary and special examinations. New extracts were developed for sharing information with other systems such as the Graduate Destination Survey, Student Experience Survey, Course Profile and Library systems.

Links were developed to share information from the Aurion Human Resources system and improvements were made in the Class Signon, Letter Generation and QTAC processing modules. Access to SI-net and mySI-net was also extended to allow single-signon for staff to increase security and efficiency.

In 2006, the upgrade of the SI-net PeopleSoft system from version 7.6 to the fully web-enabled 8.9 version, part of a large and complex project, was completed. PeopleSoft 8.9 operates in a Sun E25K environment, which provides increased Disaster Protection.

Changes to student fees

The Higher Education Support Act (HESA) was passed by parliament in December 2003. These reforms saw major changes to student financing requirements that led to substantial changes in student information systems.

ITS worked closely with a project team led by Central Administration to develop new modules including:

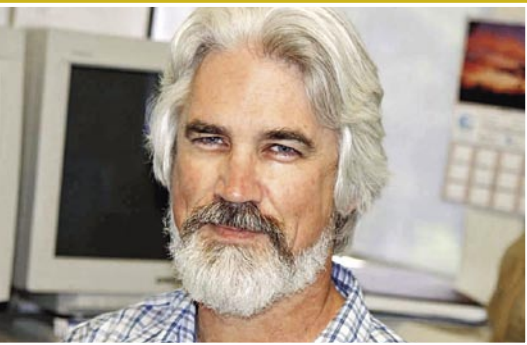
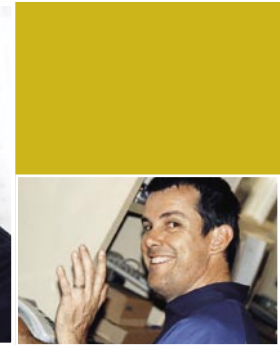
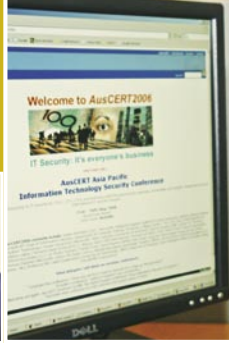
- An XML link to the new Higher Education Information System (HEIMS) to allocate Commonwealth Higher Education Student Support Numbers (CHESSNs) and receive entitlement balances
- The Fees Calculator website to help students estimate their semester fees online
- Electronic Commonwealth Assistance Form and Notice web pages available from the mySI-net system

The project required the application of four patch bundles from PeopleSoft and the development, testing and implementation of numerous program changes to handle financial and DEST reporting requirements. The multi-phase project was delivered on schedule over an eight month period.

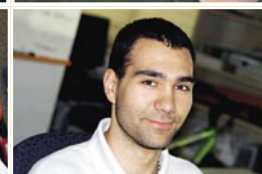
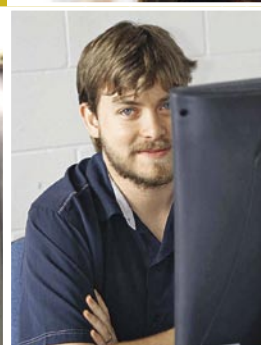
Assisting External Studies

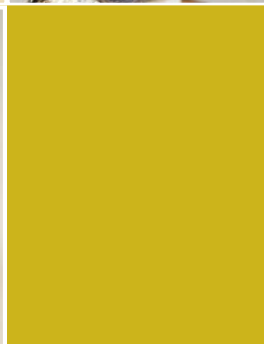
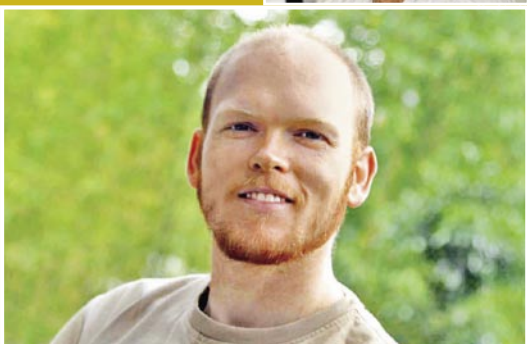
The Distance Education Centre worked with ITS to develop a system to handle the course material mail-outs and assignment tracking for external students administered at Gatton.

The External Studies system is fully integrated with the SI-net Student System.



meet our staff »







management & resources »

A focussed team of IT professionals contributes to ITS' reputation of being an organisation that is innovative, progressive, and committed to customer service

Our Staff

In a fast-paced IT environment, people need to be adaptable, innovative and work collaboratively to achieve organisational objectives. The essential ingredient for ITS' success has been to develop a team purpose that is focussed on specific goals which rely on the team's collective efforts and personal commitment.

Examples of the ITS' commitment to customer service are:

- Our accreditation with the ISO 9001 certification – this project involved an enormous amount of energy and staff commitment
- ITIL training initiatives – to ensure compliance with ITIL standards across the University community, ITS facilitates regular ITIL foundations workshops. This is expected to continue in 2006
- Help desk customer support - the Help Desk extended its hours of operation to 8.00am – 10.00pm (weekdays) and 9.00am – 5.00pm (weekends)
- UQconnect implemented a national dial-up number allowing customers to connect from most areas in Australia for the cost of a local call

ITS Staff Awards 2005

In 2005 ITS held its first awards to recognise and reward the achievements of staff. Staff members were nominated by their peers for awards in three categories: Outstanding Team Member, Excellence in Customer Service and Most Respected Manager.

The three award winners were:

- Outstanding Team Member: Terry Weatherhog
- Excellence in Customer Service: Michael Howard
- Most Respected Manager: Darren Wilkinson

ITS Achieves ISO 9001:2000 Certification

ITS demonstrated its commitment to quality management by achieving ISO Certification Standard 9001:2000 in late 2005.

All of ITS was involved in working towards the internationally acknowledged certification, which is awarded to organisations for meeting strict quality management standards.

Quality management relates to the processes followed to meet customers' quality requirements and enhance customer satisfaction. Continuous improvement of processes is a major focus of the ISO standard. ITS has shown its commitment to this aspect of the standard by passing both of its follow-up audits.

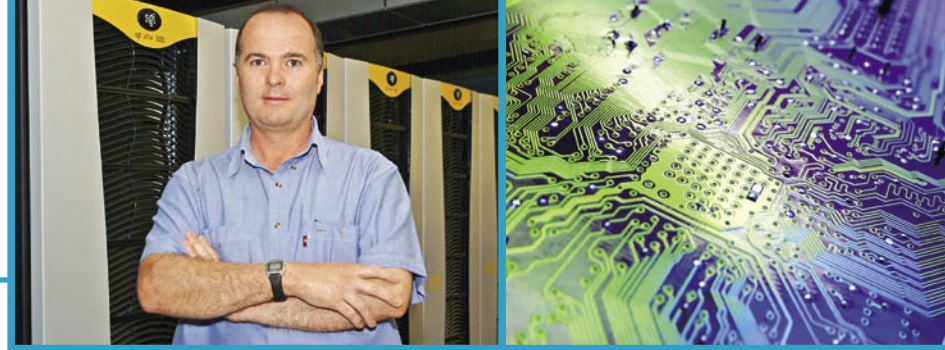
The audit, carried out by NATA Certification Services International (NCSI), concluded that ITS had undertaken a large number of initiatives to improve system processes since the certification was achieved last year.

Bringing ITS's quality management standards into line with ISO 9001:2000 has produced a number of benefits, including improved business continuity and a better understanding of how systems interrelate.

NCSI presented ITS with the ISO 9001:2000 certification in December 2005.

New horizons

In 2005, we said farewell to three long standing team members, Lynda Murdoch, Dennis Clem and Ian Burgess who all retired and are blissfully enjoying their days of leisure.



Key IT Projects

Mail & Calendar Upgrade

In January 2005 ITS initiated a project to create an Exchange - based mail and calendar system for staff as a replacement for the existing Sun IMS system. The advantages are:

- Provision of additional groupware functionality such as shared mail folders to improve, or maintain existing, staff productivity
- Provision of a better web interface for both mail and calendar
- Additional storage capacity increasing the free quota from 200MB to 500MB
- A more fault tolerant system operating across two separate data centres
- Solution to the problems on the previous system with running Outlook in IMAP mode

After extensive development throughout 2005, the Exchange system was implemented from January 2006. By August, 2408 staff across UQ had been migrated to the UQ Central Exchange System. The system continues to be implemented progressively across the University, and server and disk upgrades have occurred to facilitate this.

Project Management Server

ITS is now using Microsoft project for project portfolio management. After a successful trial of project server in the first half of 2005, ITS commenced rolling the system out to ITS managers and now manages the project portfolio using the system. All strategic projects are registered in project server and can be viewed by management as a portfolio. During 2006, ITS has been rolling out MS Project Server to track and manage strategic projects. Other organisational units such as BACS, ITEE and Health Sciences have expressed an interest in making use of the system. ITS is presently designing a training course for this system.

The benefits of project server include:

- ITS managers can see all 50 strategic projects in a single view
- ITS managers can update project status and details in real time backing on to a common enterprise database
- The system can be used to generate custom reports
- There is a university-wide site licence for the web interface
- Staff can access project server from Outlook, with task assignments appearing in their diary
- Document Storage: Associated project documents like charters and meeting minutes can be added to the project and made available to management via a common web interface
- This has formed the foundation onto which other functionality could be used in future such as:
 - o Enterprise Resource Management: All ITS staff are entered as resources in the enterprise database and allocations can be assigned and tracked on an enterprise basis
 - o Tracking actual time spent on individual projects
 - o Timesheets: Team members can enter actual time spent on tasks using the web interface directly or a web interface via Outlook calendar
 - o Timesheet Approval: Timesheets are approved by team managers via the web interface

New Prentice Data centre

ITS is close to reaching capacity with its existing data centres, one of which is the oldest data centre in the state. The requirement to build a state of the art data centre to increase capacity was identified and report submitted in June 2004. In 2005, an initial requirement was put forward for a data centre on level three of the Prentice building which identified a need for additional funding. Also in 2005:

- A risk assessment of the Prentice building was undertaken in conjunction with the University OH&S, risk management and fire safety staff which outlined significant issues with the Prentice Building and
- A new data centre strategy was developed and approved by the ITSP which outlined the long term implications of adequate provisioning of data centre capacity, and accommodation for infrastructure for disaster recovery and business continuity. The strategy called for the University to construct a primary data centre at St Lucia to replace the ageing Prentice facility, a secondary and tertiary data centre off-campus for BCP/DR purposes

The outcome of this activity has been the upgrade of facilities in the current data centre to enable continued operation with some expansion, building of a tertiary data centre in the new CCR building at Herston and approval by the Space Management and Planning Committee for some funding for a data centre in Prentice and the initiation of a project control group for this project.



Left: Terry Weatherhog, Team Leader, Network Development Services, in the Prentice Data Centre. Terry received the ITS Award for Outstanding Team Member in 2005

Right: Richard Billington, Assistant Systems Programmer, Unix Systems Group, with the Sun E25k hardware

Sun E25K Project – Corporate Applications Infrastructure Upgrade

UQ's Corporate Applications, including Aurion (human resources), Masterpiece (financial) and SI-net (student administration), have received a major computer upgrade with the deployment of next generation Sun E25000 Enterprise Class hardware. These Corporate Applications, previously deployed on Sun E10000 hardware, received boosts in capacity, reliability and availability.

Technical highlights of the new architecture include:

- A high level of flexibility with the use of Solaris Containers that virtualises the Solaris operating system, allowing consolidation, greater utilisation of resources, improved security and simplicity of systems
- Sun Cluster technology that automates fail-over to standby systems, so Corporate Applications will keep working even after a major hardware failure
- Utilisation of the new ITS SAN (Storage Area Network) disk storage system. This provides far greater reliability, availability and scalability of data storage
- Use of the Oracle 10g Database Management System
- Hardware co-located at two ITS data centres; GP North and the Prentice Building

The new architecture allows for greater flexibility, reliability, and expansion capability. This architecture provides the University with a solid foundation on which to base future Corporate Application projects, and meet goals such as technical Business Continuity.

By mid-2006, Major Central Administration projects, including the SI-net PeopleSoft 8.9 Upgrade Project, and the Aurion 9.0.2.0.5 Upgrade Project were using the E25Ks in production environments.

Web Serving Architecture

The decommissioning of the SUN E10ks in 2006 provided an opportunity to upgrade the UQ web serving architecture. The migration of the 323 websites from the E10K was a major change management project requiring extensive interaction with website owners. Each website needed to be migrated individually and website owners were consulted prior to migration to ensure the process happened smoothly and appropriate testing was undertaken. The migration of the my.UQ website required significant changes to ensure it worked in the new environment. Changes were required to support the system running on a farm of servers instead of a single server. The newer version of the operating system required the rewriting of some components such as myFiles, which allows users to access their documents on central storage, and myNewsgroups, which interface with the UQ news server. The migrations started in early July, and all websites had been migrated by the end of September.

The new architecture offers many advantages, including:

- High availability of websites gained by running a web farm instead of a single server in multiple data centres.
- Data centre redundancy
- Separation of websites and databases
- Clustering of database servers
- A horizontally scalable system allows for future growth
- An off site server stores a copy of the websites to allow for business continuity in the event of a disaster

The web serving architecture consists of a web farm of 8 SUN V40z servers:

- 4 Production servers
- 2 database servers
- 1 Staging server
- 1 Disaster recovery server

Making it easier to manage desktop computers

ITS currently provides support to 3000+ desktop and notebook computers across 3 campuses and many organisational units at UQ. This support is all-encompassing and includes traditional reactive responses to personal computers, printers and peripherals such as PDA's and Smartphones, and proactive management such as Fleet replacement strategies, Strategic Management, Policy Development, IT planning and Project Management. These services are provided under Service Level Agreements with measurable Key Performance Indicators (KPI). Currently, ITS has Full Service Level Agreements with key UQ organisational units such as:

- Central Administration
- Ipswich Campus
- Faculty of NRAVS
- Faculty of Arts
- TEDI

In delivering support services to our customers, ITS is always looking for areas where improvement can be undertaken which will deliver to customers the following benefits:

- Increased Reliability
- Greater Availability
- More efficient service delivery including faster repair times
- Reportability

In 2003, ITS began implementing Desktop Management Strategies with the introduction of Standard Operating Environments and build technologies. Later that year, ITS outlined a project to further develop its support environment to meet best practice and to deliver on the benefits outlined above of a Managed Desktop Strategy. The Managed Operating Environment (MOE) project was borne out of these objectives. An important criteria to the development of a Managed Operating

Left: James Morrison in concert at the UQ Centre, May 2005.
 Photo: Chris Stacey, The University of Queensland
 Right: Chris Parker, Senior IT Manager, Software Infrastructure, the ITS team who developed Quotient



Environment was that it not become a "Controlled" environment. The University's teaching and learning environment is not conducive to being controlled and thus the Managed Operating Environment provides flexibility while maintaining a solid foundation to build upon. In late 2004, ITS piloted the MOE within ITS and began the introduction of the tools to the support groups. By the end of 2005 these tools had been rolled out to all ITS Service Level Agreement customers. These tools provide customers with:

- Stable Standard Operating Environment
- Standard hardware platform
- Faster build/rebuild services
- Remote Desktop Support
- Application Deployment
- Auditing of systems and status
- Reportability of a customer's PC fleet

In 2006, ITS continued the development of its Desktop Support Strategy with a focus on developing support services. A key aim is to achieve a higher level of first point of contact resolution at the Help Desk. ITS will also investigate self-sufficient service delivery, which allows customers to select and deploy applications directly to their own PCs. Finally, ITS is looking to expand the reporting available for clients, as well as systems status and proactive management.

UQ Centre Audio & Event Rigging Services Upgrade

Throughout 2004-2006, the Network Support Services Group in ITS has provided systems design, specification and project management.

The UQ centre upgrade project was initiated to provide University graduation ceremonies and various high-profile events throughout the year with facilities commensurate with a nationally-recognised civic venue, including equipment that is directly interoperable with that of the professional entertainment industry. ITS worked in conjunction with Property and Facilities and the Academic Registrar to bring about an appropriate solution.

Being a multi-function venue, the UQ Centre posed several engineering challenges:

- The PA system needed to sound clear within a reverberant environment
- The Graduation PA system needed to be removable
- The solution needed to be flexible (reconfigurable) to meet the requirements of other usages of the Exhibition Hall

Of interest is the concert configuration (used for Graduation ceremonies and high-profile events), which is accommodated by motor hoists in the ceiling space suspending large-format wave-guide loudspeakers behind two large video screens. The video screens are an acoustically transparent technology called Cinematic Weave that allows sound from loudspeakers to pass through them like a cinema. Altogether there are 22 motor hoists now installed in the UQ Centre ceiling space to cope with various rigging arrangements.

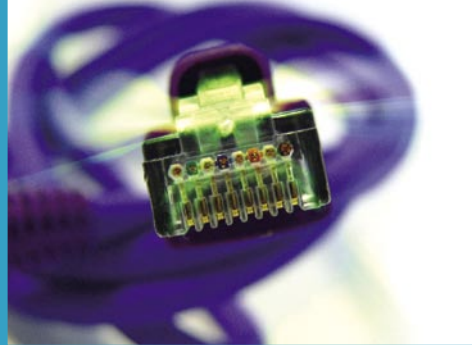
The 2005 test for the new concert configuration was the James Morrison concert as part of the Aussie International Friendship Program promoted by

Chaplaincy Services. The concert was a success with many (including James Morrison) commenting on the good sound quality. James Morrison is pictured above from the concert, using studio microphones brought in for the act.

Now IT Managers can Manage and Budget Internet Traffic

Quotient, UQ's Internet traffic management system, revolutionises the way Internet is accessed at the University. Before its introduction in 2005, the cost of Internet traffic was determined by the IP address of a computer station, which meant the cost was linked to the computer, rather than the person using the computer. Consequently organisational units had no idea who was using the Internet, and how much it cost. With Quotient, Internet access at UQ is linked to individual customers.

Quotient was developed to coincide with the introduction of the AARNet3 network, which brought gigabit Internet connections to UQ. This faster connection speed highlighted the need to provide customers with a way to monitor and restrict the usage of Internet traffic. Some organisational units were accruing large traffic bills and had no way of controlling Internet usage, while a ruling made by the Information Technology Services Policy and Planning Committee (ITSPP) dictated that every customer connecting from the University network had to authenticate before being permitted onto the Internet. Customers partaking in illegal activities also needed to be identifiable. The AARNet3 billing model had also changed from a pay-as-you-go to a subscription based system, giving free unlimited access to research institutions on the AARNet3 "on-net" network and a pre-paid quantity of "off-net" commodity traffic. UQ needed an internet accounting system that could cope with this.



Investigation of commercial products revealed a limited ability to cope with the high traffic volumes at UQ (potentially up to 10 Gig/sec), and no way to monitor Internet usage by username rather than IP address. At the same time, improved network equipment which was able to monitor Internet traffic and cut off customers, who had exceeded their quotas in real time, became available. Previous technology had not been capable of cutting off large downloads, allowing the customer to download far more than they were permitted to. However, the software supplied with this equipment was very limited and incapable of handling the extensive needs of a large University.

The ITS solution was to develop UQ's own traffic management and account system that could be interfaced to an authenticating firewall. The system was developed during 2004 and delivered to the University's campuses in a staged roll out starting in January 2005. The rollout for staff and students began in January 2005, and by the end of the year, all UQ organisational units, staff, students and external UQconnect customers had been transferred to Quotient. ITS undertook an extensive education and promotion program to help ease the transition, holding information sessions for students and staff and placing "log out" posters in computer labs to help remind students. A website providing a broad overview of the changes was developed, as well as guides for using Quotient.

From the start of the Quotient project ITS recognised there is a diverse range of customers at UQ who have different needs. Some organisational units wanted an invisible system which simply recorded usage, giving their staff unrestricted access to the internet, whilst other areas wanted to limit their staff to pre-defined quotas. The Quotient system was designed in a flexible way allowing download quotas to be applied in different ways for organisational units.

Some were billed per megabyte for all traffic they used, with no limits on the individual customers, while others applied quotas to their customers for "off-net" commodity traffic but allowed unlimited "on-net" traffic. Quotas could be refreshed in a variety of ways such as daily, weekly and monthly.

Connections were not limited to University's wired network, as the system was integrated into the wireless network, the dial-up network and the ADSL network, effectively allowing quotas to be applied to all of these connection methods, and shared between them.

To ease the management of the system a delegated administration portal was used to allow authorised organisational unit representatives to change the download quota limits for their customers, giving them control of each customer's quota. Interfaces to HR and student systems were also developed to allow automatic population of the download quota pools, thus minimizing the work required by the delegated administrators. The delegated administration portal would also generate usage reports giving accurate information for each customer. Staff and students are also able to access information about their usage through my.uq and login.uq.

The success of Quotient has sparked interest from universities throughout Australia and New Zealand. La Trobe University has purchased the software from UQ, and ITS is in discussions with a number of other universities.

Due to increased capacity requirements, the Quotient system is being reviewed. Its review will be impacted by any changes to AARNet charges which are also being reviewed.

UQnet, our High Capacity University Network

Throughout 2004-2006, work on upgrading and expanding the network around UQ campuses continued, and UQnet was also involved in bigger, ongoing projects. 2005 saw the completion of several major projects and the initiation of new plans, which took UQnet into 2006.

Upgrading our voice system

Work began in 2004 on the major project of upgrading the University's PABX phone system, the core of which has been in operation since 1990. UQnet has been collecting information from vendors and considering equipment options for replacing the fifteen-year-old core NEC 2400 system, before serviceability issues arise. Investigations continued throughout 2005 into replacing the NEC 2400. This replacement is a complex project, and work on finding suitable systems will continue through 2006. This time frame will allow ITS to assemble a system that is cost effective, interoperable, and takes advantage of new standards such as SIP (Session Initiation Protocol), an Internet telephony application. In the meantime, ITS has been looking at ways to extend the life of the NEC 2400, through the PABX Risk Mitigation Project.

Move around campus with a Handyphone

2004 saw the expansion of UQ's wireless telephone system, the Personal Handyphone System (PHS). This system allows customers to use Personal Handyphones around UQ campuses while maintaining connection to a digital cellular system that is fully integrated into the University's PABX system.



Client Perspective - Warren Kerswill, UQ Ipswich Campus Manager

What does the SLA with Ipswich cover, and what are its benefits?

"The SLA with ITS was first signed in 1999, when UQ began operating the Ipswich campus. It covers all aspects of IT support and audio-visual support. We have a campus IT manager and six service technicians from ITS working at Ipswich. UQconnect also has a presence here. The SLA provides standardised PC, laptop, printing and photocopying platforms, and a standardised PC environment in our teaching spaces. UQ Ipswich relies on ITS advice with regard to equipment procurement, and ITS is also responsible for aggregating and managing our old equipment in the disposal process."

"Because of the size of the campus, it is cost effective to operate with a single IT service provider. The delivery of IT services is also more efficient with the SLA in place. The SLA with UQ Ipswich was reviewed as part of the Campus IT Resourcing Review in 2005, and one of the recommendations was to continue with this agreement. The SLA has worked well at Ipswich, and that's why the recommendation was made."

Data Centres

The GP North data centre was expanded and upgraded in 2005. This process saw the installation of a new generator, air conditioner, switchboards and an uninterruptible power supply. ITS plans to set up a new data centre in the Prentice Building to cope with increasing data storage requirements.

Ipswich Fibre Upgrade

In 2006 UQnet began installing a high capacity network between the St Lucia and Ipswich campuses through a Dark Fibre connection. This will increase bandwidth and introduce the ability to use business continuity machines and allow back up servers to be stored at Ipswich, as well as give Ipswich customers of the network access to the full capacity of UQ's gigabit connection to AARNet. This new network link will become the primary link to Ipswich and will replace the existing managed fibre service, sourced from AAPT. The microwave link, via Mt. Cootha, will be retained as a backup service. This new service will initially allow a six fold increase in capacity to Ipswich and, over time, will allow a further "order of magnitude" increase in capacity. The link will also provide a connection to the Ipswich Hospital and may allow schools in the Ipswich area to connect to UQ.

Customer Service

Help Desk

Through 2004 - 2006, the Help Desk continued to provide IT support to the UQ community. The applications supported by the Help Desk change constantly in the dynamic realm of IT.

In early 2005, the Help Desk's opening hours were extended to 8am to 10pm Monday to Friday, and 9am to 5pm weekends. A national Help Desk number, 1300 738 082 was also introduced to enable clients to call from anywhere in Australia for the cost of a local call.

A System Status website was developed by the Help Desk in response to client request and persistent issues with scheduled and unscheduled outages. The website provides information about planned and unplanned outages on network services.

For several years, ITS has fostered a program of employing UQ students while they study at UQ. The Help Desk played a part in growing this program by employing student casuals (usually from the School of Information Technology and Electrical Engineering and the School of Engineering). Students are given the opportunity to use the skills they learn in their studies while the Help Desk gains valuable assistance with various projects.

Help Desk Statistics

- The monthly average is about 6000 enquiries (email and phone enquiries combined)
- February and March, then July are the busiest times of each year: in February 2005 there were 8076 incoming enquiries and in March 2005 there were 7707
- The first day of semester is the busiest day, with the main enquiries being about password resets, configuration issues and mySI-net



Left: ITS Help Desk staff member Maureen O'Grady assisting students with their enquiries at the ITS Market Day marquee during Orientation Week

Right: Denis Freeland, Service Delivery Manager, helping to bring ITIL to ITS

- Throughout the year, the most common enquiries are about desktop support issues from Service Level Agreement customers, viruses, trouble with browsers and email, and ESS password resets
- The most calls are from students

Implementation of a new Service Desk System

At the end of June 2006, ITS signed contracts with FrontRange Solutions for the supply of ITIL (Information Technology Infrastructure Library) compliant Service Desk software from ITSM, and Infinite Systems for the provision of support services. This is a system to replace a number of existing Help Desk systems within ITS and was chosen with the help of many other IT groups within the University with the aim that it could eventually support a federated IT service desk across the University.

Within three weeks of delivery, the product had been installed and configured, staff had been trained, and ITS was operational, capturing phone based incidents in the new system. The previous Remedy system has been decommissioned and is no longer in use.

Within the ITIL model, incidents encompass both errors in service delivery as well as requests for service. Given the very short timeframe to deploy, only basic incident management features were implemented. Staff are currently configuring the system to provide automated incident capture, with automatic notification to users, of email based incidents.

The other major process being implemented is for service level management. This will provide automatic notification to service managers if incidents have not been responded to in a timely manner. These two key processes are scheduled to be delivered within the month.

After these two key processes, ITS will be focusing on "Self Service". This will enable customers to log incidents themselves, and to view the progress of their reported incidents.

A key design feature being incorporated is the "tenancy" model. This will enable diverse organisational units to use the system as if it were their own, yet still allocate incidents to, and receive incidents from, other organisational units. This will enable all organisational units to share a state of the art ITIL system, at a fraction of the cost had each unit implemented its own system.

Delivery of other ITIL processes, such as problem, change and configuration management is scheduled for the next two semesters. Subsequently, these processes will facilitate the delivery of information management, with Org Units being able to access metrics based reports corresponding to the processes delivered.

SMS - System Status Notification

As part of the on-going process to advise users of changes of system status, ITS introduced an SMS notification facility.

Prior to this, notification of significant system problems was via the system status website, or via email. In the event of major disruptions it is possible that neither of these two infrastructure components is accessible.

With the SMS notification facility, groups have been set up, and should a major incident occur, key stakeholders can be quickly notified, and advised of recovery status.

Managing services for clients

ITS manages Service Level Agreements (SLAs) with various organisational units within UQ, and with external clients. SLAs range in scale from agreements held with large clients like the UQ Ipswich campus to individual projects. For example, ITS holds SLAs with UQ Central Administration, Queensland Health, and for the maintenance of unique technology infrastructure, such as High Performance Computing, UQnet, and Campus audio-Visual facilities for various levels of client. Between 2004 and 2005, new SLAs signed with ITS jumped from 2 to 10, while SLA renewals grew from 17 to 23.

The services that ITS provides SLAs for include desktop and server management, storage, server housing, network maintenance, and firewall management. ITS connects UQ staff in hospitals, students in study, and assists affiliated organizations with their requirements as well.

In 2004 – 2006, ITS took steps towards improving service delivery to clients, and incorporating new technologies into SLAs. The Managed Operating Environment (MOE) and SMS gateway services offered by ITS were delivered to existing SLA clients in 2005, and will be included in newly-negotiated SLAs. Work on the Service Catalogue, which establishes greater responsiveness to client needs and improved cost transparency through pre-defined products, also continued. In 2005, ITS welcomed a Service Support Manager, Denis Freeland, who has a background in process improvement methods to further enhance customer service delivery.

The improvements in customer service have also included the establishing of an SLA register for internal groups. This register allows clients to view their SLA expectations and obligations, and the renewal dates. Working towards the ISO 9001:2000 standard introduced streamlined work processes and closer cooperation between ITS divisions,

Left: Michael Howard, Account Manager, Customer Services, represented ITS at the UQ Careers Fair in 2005. Michael received the ITS Award for Excellence in Customer Service in 2005

Right: Network Development Services staff Robbie Ruzicka, Jooil Lee and Peter Arbouin collaborating on an infrastructure project



which has resulted in improved services for ITS SLA clients.

As part of the UQ Ipswich IT Resourcing Review in 2005, a recommendation was made to renew the SLA with ITS. This SLA has been in place since 1999 when UQ opened the Ipswich campus. The SLA with the Arts faculty was also extended in 2005, to include the entire faculty. Finally, UQ Central Administration signed a 3-year SLA in 2004.

Communication and Marketing

Strategic Marketing within ITS raises the profile of ITS within the University, the IT business community and the community in general, with the aim of expanding the potential of ITS business opportunities, through many marketing and communications initiatives.

The Information Technology Liaison (ITLO) Program has been running since 2001. The ITLO Program fosters an IT community at UQ, by encouraging IT staff to join the ITLO group to forge an environment of collaboration and information sharing. Meetings are held monthly with a technical presentation sponsored by an external organisation followed by a general business meeting where campus IT issues are discussed.

These meetings are popular and well attended consistently by the ITLO group, and suppliers are keen to present to this unique audience. At no other time do all the University IT staff come together in this way.

In 2005, the ITS website was redeveloped to be more client focused by providing more effective online service delivery and communication. Information on the website is managed using the University's Online Content Management Publishing System (OCMPS). The redeveloped ITS website was achieved in-house through the coordinated efforts by a range of staff from Strategic Marketing, the Project Office, Software Services and Software Infrastructure.

Enhanced communication to students has been a focus particularly in recent years by:

- Distributing the IT Tools for Students which describes the suite of IT services available for students
- Providing specific information for students on the ITS website about IT services available

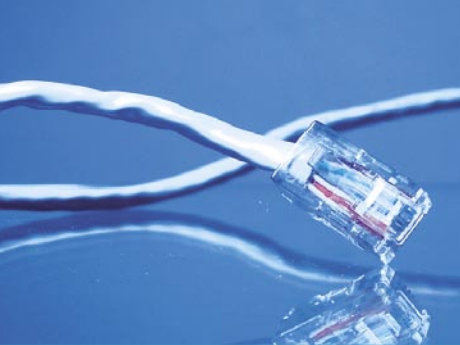
- Streamlining Orientation Week activities including promotions and lecture theatre presentations
- Standardising information in UQ handbooks and other publications

Attention to communication to University-wide staff has improved information available about IT services, particularly through the ITS website and the IT Tools for Staff booklet, which sets out information about IT services for day to day work, teaching and learning, research, and IT help available. In recent years, Strategic Marketing has given presentations to UQ staff on the staff portal (my.UQ), the newly introduced traffic management system, and the SPAM Act. New product promotions (such as the Wireless network) raise awareness among the UQ community and wider general public about ITS initiatives.

Strategic Marketing provides assistance in organising the AusCERT Conference since the inaugural conference in 2002:

- Public Relations coordination to achieve extensive media coverage before, during and after each conference
- Graphic Design of all printed and online promotions
- Photography of speakers and delegates for promotional use and archival record

Market research of staff and students through conducting surveys, focus groups and interviews has provided ITS with information about customer needs and wants for the planning and development of services.



Tender and Preferred Supplier News

Much of 2004 and early 2005 were spent working towards the two big tenders renegotiated in 2005. To ensure that the most suitable products and services were chosen for each tender, ITS spent a significant amount of time on testing and evaluation.

Desktop and Mobile Computing

In mid-2005 ITS revised the Desktop and Mobile Computing Preferred Supplier Agreement, which had been in place since 2002. The list of suppliers was reduced from five to two, with Dell and Hewlett Packard (HP) chosen. The Desktop and Mobile Computing Agreement covers desktops, laptops, tablets and Windows Operating System-based Personal Digital Assistants (PDAs). These products are offered in standardised packages including a set of applications that form the UQ Managed Operating Environment. In late 2005 the ITSPP (Information Technology Services Policy Planning) committee approved a recommendation that purchases of desktop and mobile computing equipment by organisational units must be made from the PSA Panel.

Audio-visual Equipment and Services

The preferred supplier agreement for audio-visual equipment and services was also renewed in 2005. This is a combined tender between UQ, Queensland University of Technology (QUT), and Griffith University. It covers equipment, and services such as installation, design, repairs and warranty services. The preferred suppliers are Videopro, Advanced Video Integration (AVI), Electroboard and Musiclab.

Other Tenders

- The Microsoft CAUDIT campus agreement was finalised at the end of 2005. This is also a combined tender with all Queensland universities
- A tender for Tier 2 Storage Arrays was also renegotiated

Symantec Antivirus

In 2004 a security review of the University's network, UQnet, was conducted by AusCERT. The review highlighted that not all computers connected to UQnet were protected by anti-virus software.

After consideration by ITCG and ITSPP it was agreed in principle that all machines connected to UQnet should have anti-virus protection and that the University would go to tender for a university-wide product covering, if possible, both staff and students.

The tender evaluation process was concluded in July 2005 with the review group recommending that the combined anti-virus and anti-spyware product from Symantec be chosen as the University standard for Microsoft Windows, Apple Mac, Linux, Sun Solaris and PDA (Windows Pocket PC) platforms.

It was agreed that up-to-date Symantec anti-virus and anti-spyware software would be mandatory on all University owned and/or leased machines and staff machines connected from home or on campus.

community partnerships »



ITS strives to make significant contributions to the intellectual, cultural, social and economic life of Queensland and Australia

IT Security Award for UQ

UQ has been honoured for playing a leading role in developing the first IT security certification scheme established in Australia.

The International Systems Security Engineering Association (ISSEA) awarded UQ the 2004 Annual Award of Excellence for the development of the International Systems Security Professional Certification Scheme (ISSPCS).

Director of ITS Nick Tate, who is President of the ISSPCS academic board, said he was very pleased with the award.

"It is an important award because it comes from one of the top security engineering associations in the world," he said.

ISSPCS is a joint project between ITS, the Australian Computer Emergency Response Team (AusCERT) at ITS, ISSEA, and Electronic Warfare Associates (EWA), and its academic board, which oversees quality, is chaired by UQ.

The scheme was created to fulfil the need for an over-arching security certification programme for IT security professionals worldwide.

While other certification schemes are available in Australia, ISSPCS is the first one to be developed here.

It is also the first scheme offering multiple levels of certification, and the first to be designed with international IT security needs in mind, as it can be tailored to suit cultural and regional requirements.

"This scheme is different because it recognises legal systems other than the US legal system and provides the opportunity to separately develop

modules which relate to different countries and regions," Mr Tate said.

The scheme is targeted at working IT security professionals, and certification can be achieved through examination or a 'Grandfathering' program which recognises prior learning and certification.

Mr Tate said achieving ISSPCS certification was a statement of professional competence in systems security engineering.

"It's a statement to the world that they have attained a certain level of professional competence in this field," he said.

The first exam took place after the AusCERT2005 IT Security Conference, while the Grandfathering scheme is already available and has attracted more than 150 applicants so far.

In response to international demand for the certification, exams are likely to be held in China, India, the UK, Canada and the US in the future.



UQconnect – Providing Internet Services to the UQ Community

UQconnect is the provider of Internet services to the UQ community. UQ organisational units receive Internet access via the on-campus wired and wireless network, dial-up from around Australia as well as industry-leading website hosting services.

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

UQconnect makes every effort to deliver quality services befitting one of Australia's leading universities and we strive to grow and adapt to meet the changing business needs of our organisation.

Broadband revs up Internet

In early 2004 UQconnect released a broadband ADSL service on par with the largest ISPs in Australia. Supplied

by AAPT and using existing Telstra infrastructure, UQconnect released ADSL to UQ students and staff, alumni, external customers and organisational units. This allows all members of the UQ community to access information on the Internet faster and more efficiently as well as ensuring fast access to work files from home.

Work at UQ, enjoy cheap Internet

In keeping with UQconnect's position of "Internet services for the UQ Community", the price discount offered to students is now extended to staff. To further enhance staff benefits at UQ, UQconnect offers payroll deductions on dial-up plans. Payroll deductions for all UQconnect Internet products were introduced in December 2005.

Spam, the ongoing war

Anyone who uses email can attest to the problem posed by Spam and UQ been the focus of much unsolicited email. ITS has been upgrading measures against Spam and so far has seen positive results.

The two main measures taken have been the incorporation of RBLs (information about known spammers) from anti-spam groups SURBL and Spamhaus into ITS' spam filtering program, Spamassassin. These groups offer a new form of RBLs that list known advertising URLs from within spam. These URLs can be tagged by Spamassassin so that potential spam email can be automatically moved into the Spam mailbox of UQ staff and students. Use of these RBLs has been very successful, with 80 per cent of incoming Spam being detected.

Website revamped

UQconnect launched a revamped website in 2005 featuring improved content, structure and new sections. Feedback has been excellent and we are continuing to add new content and improve the site.

A better deal for Colleges

In 2005, UQconnect worked with the Colleges Information Technology Group (CITG), who managed the IT services of six colleges, to provide its students with the same Internet access enjoyed by all other UQ students. The trials



conducted with several college students were successful. All UQ college students were able to enjoy full Internet access from the beginning of 2006. UQconnect now directly provides Internet services for both UQ and non-UQ students residing in colleges managed by the CITG. These colleges include Kings, Cromwell, Emmanuel, Women's, St Leo's, International House and the ITS managed college Grace. UQ students will continue to enjoy their free Internet account designed to help them make the most out of Internet-based resources and non-UQ students residing in a CITG managed college, will be also able to purchase basic Internet access at a reduced rate.

New deal for affiliated organisations of UQ

In 2005 a new arrangement was made with AARNet allowing research affiliated organisations to take full advantage of AARNet3, with unlimited access to sites on the AARNet3 and Internet2 networks. This provides affiliated research organisations with greatly improved Internet accessibility.

Wireless Broadband anywhere, anytime

UQconnect released a new Wireless Broadband product in May 2006 that uses the iBurst network to offer mobile Internet access for people on the move. Coverage is available in Brisbane, Gold Coast, Sydney, Melbourne and Canberra and iBurst plans to extend the network to Adelaide and Perth.

Servicing our alumni

ITS is looking at a range of Internet products designed specifically for UQ alumni. Developed in consultation with the Development Office, these products will provide greater incentive to be part of the UQ community.

AusCERT

AusCERT



About AusCERT

AusCERT (Australian Computer Emergency Response Team) is Australia's foremost Computer Security Incident Response Team (CSIRT), and is recognised by the Australian Government as Australia's national CERT. AusCERT provides a coordination role for handling computer security incidents between affected parties and is recognised throughout the world for its computer security expertise and its strong focus in the Asia-Pacific region.

AusCERT began operations in 1992 and is a section within Information Technology Services (ITS). It is funded primarily through membership fees, with some additional income from value added services such as training, education and development projects. Members include industry bodies, business enterprises, universities and government agencies from Australia and New Zealand. As a full member of the Forum of Incident Response and Security Teams (FIRST), an international organisation of almost 200 CSIRTs worldwide, AusCERT has helped set up national and regional CSIRTs in a number of countries in the Asia-Pacific region and continues to retain close ties with them.

AusCERT in review

2004 - 2006 has been a period of significant change in the Internet threat environment which has had a significant impact on the nature and direction of AusCERT's core work, which, in turn has brought new opportunities and challenges.

During the period April 2004 to August 2005, incidents of ID theft handled by AusCERT increased dramatically. AusCERT handled around 1300 incidents during this period. An incident typically involves a set of IP addresses and domain names established to compromise, steal and log online identity credentials

and a range of other sensitive personal information from compromised computers on a mass scale. A single incident is capable of compromising thousands of computers and compromising account and personal information of many more customers.

The nature and volume of these incidents is having a profound effect on the way AusCERT works. Through practical experience, AusCERT has been developing expertise in an area that few others possess, which has generated opportunities for new services and engagements. This is proving to be an issue of significance – not just to AusCERT and how we respond to these threats as a national CERT, but increasingly, one that the broader internet community in Australia will need to better address.

Community

AusCERT was instrumental in the founding the Asia Pacific Computer Emergency Response Team (APCERT), which maintains a trusted contact network of computer security experts in the Asia Pacific region to improve the region's awareness and competency in relation to computer security incidents. AusCERT also continues to foster strong relationships both with and between members of the information security community. In addition to having strong relationships with peer National CERTs (such as CERT/CC), Government partners (such as AGD), Law Enforcement (such as the US Secret Service and the AHTCC), AusCERT also has strong relationships with industry. AusCERT is a trusted provider of current malware to the anti-virus community. This lowers the risk of infection across the community while providing AusCERT with access to detailed analysis of threats that is not available to the general public. AusCERT, through its work on online identity theft, has facilitated a strong working relationship with and between the Australian Banks. This has been extended to relationships with the UK Banking Association (APACS) and various USA



Left: Nick Tate, Director, ITS and Chris Hancock, Chief Executive Officer of AARNet. ITS was proud to be part of the opening of the AARNet Queensland office in the Prentice building in early 2006

Middle: Delegates at the AusCERT2005 IT Security Conference, day one keynote address

Right: AusCERT conferences attract significant media attention. Computer security expert Marcus Sachs, a speaker at several AusCERT conferences, was interviewed on Channel 9's Today Show during the AusCERT2004 conference

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banks. AusCERT has strong relationships with many other software vendors who have an interest in Information Security.

AusCERT IT Security Conferences

These conferences, held annually since 2002, allow AusCERT to bring together a collection of the world's best IT security experts for the benefit of the Australian and Asia-Pacific IT community. The third annual conference (AusCERT2004) attracted 700 delegates and was highly successful, while AusCERT2005 entrenched its reputation as the premier IT security conference in Australia, with over 900 national and international delegates attending. The 2006 conference, attracted more delegates and vendors than ever before, with 1100 in attendance. A one day Executive Program took place at the conference for the first time in 2006; this event was designed to distil AusCERT2006 into one day for busy C-Level executives. After being deemed a success, the Executive Program will be offered again at the 2007 conference.

Australian Computer Crime and Security Surveys

AusCERT compiles this survey in conjunction with the Australian High Tech Crime Centre and law enforcement agencies around Australia each year, for launch at the AusCERT IT Security Conferences. The 2004, 2005 and 2006 editions continued to build upon the Crime Survey's reputation as a valuable and authoritative resource.

Training and Education

AusCERT established its Training and Education function about 4 years ago and has enjoyed considerable success both domestically and internationally. The team has trained CERTs in China, India, Chinese Taipei, Brazil, PNG, Vietnam, Brunei, Indonesia, Philippines, Dubai, Myanmar, Cambodia, Laos, Thailand, Mexico, New Zealand and in Australia. The group is also currently training the CERTs in Peru and Chile under a contract with the Asia Pacific Economic Community (APEC). AusCERT is now

one of only two CERTs, worldwide, who are practically able to provide advanced CERT training.

In the domestic sphere, AusCERT runs training courses specifically requested by CAUDIT on IT Security items of interest to the higher education sector. In 2005-06, AusCERT ran a very successful Windows Intrusion Prevention Workshop for Australian and New Zealand universities, which trained over 140 staff in 7 locations. AusCERT also develops and presents various training and educational programmes, for security professionals, describing industry best practice in incident handling and other aspects of computer security management in the form of public courses and workshops.

AusCERT, working with the Strategic Technologies Group in ITS, industry partners and the International Systems Security Engineering Association (ISSEA) has developed a global certification scheme for IT Security Professionals. The International Systems Security Professional Certification Scheme (ISSPCS) is steadily growing in recognition within the security community with applicants, to date, coming from 25 countries. In addition, institutions in Singapore and India are now looking to model their post-graduate level courses on the ISSPCS body of knowledge. ISSPCS has an Academic Board, chaired by the Director, ITS, which includes members from UQ/AusCERT, ISSEA, Carnegie Mellon University, National University of Singapore, UKERNA, BT Mahindra (India) and Information Warfare Associates.

UQtrainIT

UQtrainIT – IT Training Programs

UQtrainIT provides non-academic training courses which focus on enhancing the conceptual IT understanding and skill levels of staff, students and external clients. The training programs conducted by UQtrainIT are broken into the areas of Professional Development, Industry Training and Corporate Product Training. Over the past year UQtrainIT has continued in its efforts to meet some of the non-academic training needs of the UQ Community.

The UQtrainIT Professional Development program has provided free IT courses to UQ staff and students for over 10 years. UQtrainIT plans to continue and improve upon the Professional Development program.

UQtrainIT's IT Industry Training involves working with vendor based training programs. UQtrainIT is now able to offer a range of fee for service training courses such as The Cisco Networking Academy, The Microsoft IT Academy and the Sun Academic Initiative. In 2005 UQtrainIT had over 80 students doing courses through these programs, and these courses achieved full cost recovery.

The Corporate Product Training side of UQtrainIT aims to support ITS Corporate Product implementation. The courses are generally offered on an ad-hoc basis when requested. Courses offered in 2005 have included 'Using iPlanet Calendar', 'Email Migration' and 'Outlook with Exchange'.

