ICTS Annual Report 2009

Foreword by Sakkie Janse van Rensburg

I am proud to share ICTS's 2009 highlights and achievements with you in this report.

My first year in office as Executive Director:ICT has been both challenging and rewarding. I believe that an ICT department should support the strategies of the organisation, reflect the needs of the user community that it serves and provide services that enable people to do their jobs better and more efficiently.

I met with many stakeholders within my first few months of taking up my position which proved invaluable as it gave me an understanding of the problems and challenges faced by the user community. At the same time, I met with every staff member in ICTS. This allowed me to quickly assess the department and the role it was playing in serving the user community. One major gap in the current service delivery was that ICTS had no specific focus on supporting researchers. I then met with various research groups and students to clarify their needs. Research support is now included in the ICTS service delivery portfolio.

Following the success of the supaTsela ICT Infrastructure renewal project, I believe that the next logical step is to empower end-users. I will therefore continue to build relationships, foster strategic partnerships and provide the IT infrastructure and support required by an evolving campus community. I am committed to aligning ICTS with the UCT strategic objectives and ensuring that the best possible services and resources are supplied to you.

Executive summary

Human resources and staff development

New appointments

Sakkie Janse van Rensburg started as Executive Director: ICT in February and Brian King handed over the ICTS Financial Manager portfolio to Mvusi Nkunkuma in October 2009.

Retirements

Dr Fred Goldstein (Technical Director), Brian King (Financial Manager) and Gail Lindenberg (senior office administrative officer) all retired at the end of 2009. Their wisdom, sage advice and noteworthy contributions will be sorely missed.

Positions held outside of ICTS

Sakkie Janse van Rensburg serves on the Executive Council of ASAUDIT (Association of South African University Directors in Information Technology) and is also the co-ordinator for a Special Interest Group for High Performance Computing for HE institutions (ASAUDIT).

Peter Dawes has been re-elected to the Oracle Higher Education User Group Product Advisory Group for Student Records. This is a considerable honour for UCT and Peter is held in high esteem by this international user group.

Kira Chernotsky chaired the Management/Employees' Union monthly meetings; served as a Council-appointed UCT Retirement Fund trustee; served on the committee running an RFP for UCT's new PPS training services and participated in the Skills Development Fund subcommittee.

Bruce Fielies is the co-ordinator for a Special Interest Group for Service Management for HE institutions (ASAUDIT).

Divisional reorganisation

The major restructuring exercise in Administrative Computing Services is continuing in conjunction with the affected areas.

ICTS staff achievements

ICTS has a strong culture of learning and development. The IT Information Library (ITIL) framework, adopted worldwide as a robust IT service management framework was formally adopted by ICTS in 2008. A number of ICTS staff members have successfully obtained their ITIL Foundation certification with others going on to obtain ITIL Practitioner status. Bruce Fielies, team leader of the Technical Services team and an ITIL champion, obtained his ITIL Masters certificate and his Prince 2 Project Management certificate. ICTS staff members have also presented papers at both national and international conferences.

Internal staff development programmes

Every Thursday afternoon, ICTS staff members participated in training and information sharing sessions that covered a range of topics from information about existing services and support to customer service training and exposure to new products or services in information and communication technologies.

Cisco Certified Network Associate (CCNA) training took place once a week over lunchtimes for a period of 14 weeks in preparation for the CCNA examination. This successful programme will be run again during 2010.

Key topics for ICTS during 2009

Email

Stability issues on the GroupWise email system presented a challenge for ICTS in early 2009. The GroupWise remediation project was given priority over other projects and significant progress was made once we had Novell's commitment. The system stabilised after Novell made changes to their code and recommended patches for our system. The email system was moved to a new operating system and the GroupWise client was upgraded to version 8. A senior Novell engineer monitored the system daily until the problems were resolved. The campus community were kept informed throughout the project by email and regular updates on the ICTS website. The University ICT Committee (UICTC) established an email review sub-committee to investigate and report on the best possible mail solution for staff and students at UCT.

Internet

We more than doubled our Internet bandwidth during 2009, moving from 32 Mbps at the beginning of the year to 84 Mbps in October. This was largely due to the cheaper international bandwidth available as a result of the Seacom initiative, allowing us to purchase significantly more backbone (local) bandwidth. The substantial increases are still not nearly enough to satisfy UCT's needs; however more bandwidth will be made available once UCT is connected to SANReN later in 2010.

In 2009, ICTS introduced a new service that allows conferences to purchase bandwidth specifically for the use of their participants.

High performance computing

ICTS is committed to supporting research at UCT and demonstrated this by agreeing to host the UCT-CERN research centre computing facility in our Upper Campus Data centre. ICTS currently hosts the core services infrastructure of the South African National Grid and hosts its own High Performance Computing (HPC) infrastructure. These facilities are managed by two senior ICTS engineers who attended an intensive HPC administrator course in Catania, Italy. UCT also co-hosted the South African HPC Special Interest Group conference at the Centre for High Performance Computing in

Mowbray, Cape Town. In this way UCT maintains a stake in a leading edge physics experiment, IT staff gain experience in running a high availability cluster as part of an international collaboration and physics students have access to experimental data for incorporation into their research.

Visits to South African, Australian and North American universities

Collaboration and sharing knowledge is critical to keeping an organisation at the forefront of its field. Members of the ICTS management team therefore travelled to South African and international universities to investigate how these institutions use information technologies and to assist us in making technology decisions. Their findings helped to benchmark ICTS services against local and international standards. In many cases it was found that UCT is leading technologically and delivering a broader range of services to its community than the universities visited.

Progress with the Identity and Access management (IAM) project

Identity and Access Management (IAM) is a system used to automate the provisioning (provide access) and de-provisioning (remove access) of access to IT resources such as email, network file storage, Internet access and Vula. In 2009 we continued to make steady progress with the IAM system. In particular, we made substantial enhancements to the provisioning of PeopleSoft and Third Party System users. We also enabled de-provisioning for PeopleSoft and Third Party System users. This has positive spin-offs for security and for freeing-up IT infrastructure, such as disk storage. The new Access Control system is the latest system connected to, and provisioned by IAM. For this purpose the IAM team developed a new driver, which was put into production in November 2009. New users in one of the authoritative systems are now automatically provisioned into the Access Control system.

Cost saving initiatives across the university

Through a project that saw another 1000 telephone lines at UCT privatised, ICTS managed to bring UCT's internal telephone line rental and voicemail subscription down from R210 in 2009 to R185 for 2010. Given that the Telkom rate for outdoor extensions rose to R519 in September 2009, this represents a significant cost saving for UCT.

We also made a number of significant changes to central administrative and student management systems to streamline processes and reduce the amount of printing required.

Service level management

The Core ICT Services Service Level Agreement (SLA) came into being in June 2008 with the first quarterly reports being published to the website in 2009. The reports show that in almost all areas we met or exceeded our SLA targets. A newly implemented service improvement process highlights and addresses any cases where the SLA targets were not met.

Microlab project successfully managed

During the June and the December vacation periods, ICTS ran two microlab imaging projects during which software changes were made to more than 2000 computers in forty-three computer labs. In December 2009, in addition to the standard base image, over 300 specialised software packages were installed. The success of these annual projects can be attributed to a dedicated project team and the close working relationships between ICTS and faculty representatives.

Interactive Voice Response (IVR) system piloted

The implementation of an Interactive Voice Response system IVR technology proved challenging as UCT does not have an IP-based PABX, but the pilot was successfully completed in December 2009. Calls to the Helpdesk will be routed via the IVR system once further customisation has taken place. The IVR system will then be rolled out to other call centres on campus.

Computers in lecture theatres imaged

All computers in lecture venues on Upper Campus now run a standard image which is secured by Deep Freeze. This solution, first implemented in 2008, was extended to all Upper Campus lecture theatres during 2009 and has improved the uptime and reliability of these computers. It is hoped that this image will be rolled out to lecture theatres on other campuses in the future.

Management of site licences

In 2009, ICTS renewed a number of site licences including Statistica, GENStat, SPSS, Turntin and Microsoft software.

Student administration processes streamlined

Processing of student financial aid applications and payments was streamlined by the introduction of the direct submission of student loan applications to NSFAS (via "web services") and the automated calculation of aid amounts using the PeopleSoft "Equation Engine"; these resulted in reduced staff workload and improved service to students. Streamlining the payment of student fees (credit card payment facilities, proforma invoice production and the outsourcing of student statements printouts) resulted in reduced costs and an improved service. The Residence Management System used by Student Housing was re-implemented to facilitate streamlined business processes. Systems support for processing results for the National Benchmark Test (introduced in 2009) and the National Senior Certificate will improve turnaround times in the Admissions office.

New course booking system developed

A new system was developed to manage course bookings for the Continuing Education and Extra Mural Studies departments.

Compliance and security at UCT

Security changes were made to the Finance and HR systems in SAP (sign-off processes, security and the consolidation of roles within SAP) to ensure compliance as recommended in the external IT auditors report. Access to UCT Enterprise Resource Planning systems (such as SAP, PeopleSoft and RMS) is monitored. ICTS staff participated in the University-wide project to implement the new Access Control system. A team from Administrative Computing Services was involved in a major software upgrade to UCT's procurement card software. Proper password management by staff and students is crucial to the security of the network. ICTS began an investigation into the challenge response questions used by Password Self-Service to better understand why users don't use this online tool. Antivirus update files, application and operating system updates and patches were tested and regularly released to networked computers to ensure the security of UCT's network. In addition, the McAfee antivirus server and software were upgraded to allow for real-time protection from threats.

ImageNow upgraded and deployed to other departments

The ImageNow document management, imaging and workflow system (used to efficiently manage admissions documents) was migrated to new hardware and upgraded to the latest version 6.3 which allows for integration directly into PeopleSoft. This enables authorised admissions officers and faculty staff members to access all the resources that they need in order to make selection decisions. In October, the ImageNow system was also successfully deployed to the Office of the Vice Chancellor, to Human Resources and to ICTS. There are future plans to deploy the system to the wider campus community in an effort to reduce the number of paper-based processes as we strive towards a paperless environment.

Student residences networked

The bulk of the work to cable rooms in the residences and connect them to the UCT Residence network (ResNet) was completed during the 2008-2009 end-of-year vacation. The remainder of the

residences were then cabled during 2009. Improvements to wireless technologies allowed ICTS to connect smaller residences to ResNet at affordable costs and within budget constraints. In addition, service improvements were brought about by changes to ResNet application procedures and the introduction of roaming access for all registered residence students. We applied Quality of Service (QoS) on the residence network routes to counteract abuse on the network. Cable remediation was conducted in certain identified areas. Of the existing 5968 rooms within UCT Residences the project was able to install 4613 networks points. ICTS has completed the initial feasibility studies regarding connectivity of the leased residences and will present solutions at the next Project Management Group meeting.

Wireless networking extended

The requirement for wireless networking continued to grow during 2009 -the number of wireless access points (APs) now totals over 120. This growth resulted in the need for on-site diagnostic and problem solving tools to diagnose faults that appear on the wireless system. Many of these faults were caused by rogue wireless AP's. A strategy for dealing with rogue wireless APs was developed and an upgrade to the AirMagnet surveying tool was purchased. The UCT-secure wireless has remained usable and secure due to constant monitoring, ensuring authenticated login, and providing upgrades to the APs.

Green IT involvement

ICTS is a member of the Green IT Special Interest Group and members of staff took part in an online 'webinar' to share information about Green IT initiatives with other universities. ICTS has mainly focussed on power management in the UCT data centres. Changes were made to student administration and central systems to reduce the reliance on paper resulting in printing and postage cost savings.

Proactive support initiatives undertaken

During 2009, the IT Helpdesk received an average of 4936 calls per month, closing 59% of these calls within the first day. Call management and ownership in the IT Helpdesk was streamlined by making changes to the Helpdesk teams. A Knowledge Management project to update all policy, technical, and IT service information was launched in 2009. This will enable IT end-users, as well as Helpdesk consultants, to quickly navigate to information related to their support requests. A number of "Working smarter with GroupWise" information sessions were presented across all campuses, including Worcester. Computer literacy levels were increased by actively marketing the ICTS training courses to increase attendance. ICTS staff members presented general ICT information sessions to student groupings and at orientation/induction meetings. Regular informational articles and emails were sent to staff and students or published in the Monday Paper and on the UCT and ICTS websites. Two student ICT services guides (one for undergraduates and one for postgraduates) were produced, printed and distributed. Three Product Demo Days were held where the UCT community could view laptops, Adobe products, and other software and products and discuss their requirements directly with the vendors.

Training attended and certification achieved

Course	Attended and certification achieved
Cape Higher Education Consortium (CHEC) Regional Middle management Development Programme	Carl Williams
Cisco Certified Network Associate (CCNA)	Erisan Nyamutenha
CompTIA Linux+	Justin Holmes
Enterprise Content Management Practitioners	Andre le Roux
High Performance Computing Grid training at INFN Istituto Nazionale di Fisica Nucleare, University of Catania, Italy	Tim Carr, Andrew Lewis
ITIL Foundation certificate	Abraham de Villiers, Andrew Stephen, Ashley Rustin, Jamiela Dawood, Janrik Oberholzer, Mark van Heerden
ITIL Manager – IT service management	Bruce Fielies, Ashley Rustin
ITIL Practitioner Support & Restore – Service Desk & Incident and Problem Management certificate	Carl Williams, Charl Souma, Megan Abrahams, Philemon Ilyihamije, Raymond Maclean, Steffne Hughes, Tina Charles, Wayne Abrahamse, Ziyanda Panyana
Leading Executive Programme (LEP) at GSB	Kira Chernotsky
Mastering ImageNow 6.2	Ashley Rustin
Microsoft Certified Technology Specialist	Watson Kahona
New Managers Programme (NMP) at GSB	Steffne Hughes, Margherita Introna
Prince 2 Project management	Bruce Fielies
Programme for Management Development (PMD) at GSB	Willie Du Plooy
Strategic Planning Toolkit at GSB	Jean Knaggs
Web Design	Faith Beta

Conferences attended and hosted by ICTS

Conferences hosted by ICTS
South African High Performance Computing Special Interest Group conference at CHPC, Cape Town
ASAUDIT Annual IT Directors conference, attended by IT Directors from HEs across South Africa and opened by Prof J Beall.

Conferences attended and visits to universities	
Allan Brinckmann	- Oracle Alliance 2009 - Attended the special one day Executive forum at Alliance 2009 - Visited the University of Witwatersrand; University of Pretoria
André le Roux	- Gartner Data Centre conference - Visited the University of Michigan, Indiana, Boise; University of California, Los Angeles (UCLA)
Bruce Fielies	- DITCHE events - Presented at DITCHE on Service Management initiatives - Coordinator for a Special Interest Group in Service Management for Higher Education Institutions (ASAUDIT)
ICTS staff	- Oracle Alliance 2009 - Visited the University of Stellenbosch
Jonathan Christie	Visited the University of Free State; University of Johannesburg
Kira Chernotsky	- Educause 2009 - Visited Australian universities: University of Melbourne; University of Queensland; University of Sydney; University of Western Australia; University of Western Australia; met with a representative of the University of Notre Dame - Other universities: North Carolina State University, United States; McGill University, Canada
Mike Currin	- Novell technology Transfer Partners (TTP) - Presented a paper at TTP on "Novell Technologies at UCT
Peter Dawes	- SA Oracle user group - Presented a paper at Oracle conference - Re-elected to the Oracle Higher Education User Group for Student Records
Sakkie Janse van Rensburg	- Hosted ASAUDIT 2009 - Hosted HPC SIG at CHPC - UCT mini-conference on teaching and learning; participated as panellist - Aligning Security & Risk Management with IT Service Management Strategies - Visited the University of North West; University of Free State; Pretoria, University of Western Cape and Stellenbosch
Senior management	- Gartner Symposium - Enterprise Architecture by Zachman - COBIT maturity assessment of UCT ICT - Oracle Alliance 2009 - Visited the University of Stellenbosch
Timothy Carr	Novell technology Transfer Partners (TTP)
Willie Du Plooy	Visited the University of Free State; University of Johannesburg