

IT Services Annual Report

August 2008 to July 2009

Executive Summary

This annual report highlights some of our contributions and activity to the life of the University during the last twelve months. This version is presented in a broadly chronological format. An accessible version of this document will be prepared for staff and students as part of the Annual Reporting process within Learner Support Services. There has been an accompanying presentation to Information Strategy Committee in June 2009 of just three items that were identified from this report (items in boxes below). There are a significant number of activities, many of them “business as usual” which do not appear in this report, but are no less important to the success of the University. I would like to thank every member of staff in the IT Services team who has contributed to a successful year for the IT Service At the University of Bradford.

Graham Hill
Director IT Services

Key activities in broadly chronological order

Clearing and Enrolment 2008/09

There was general agreement after Clearing 2008 that the technical aspects had been a success. All systems and telephony performed well under stress and the University met its Clearing targets. On balance, enrolment was also a successful event this year. Many people contributed to the registration and intake processes - the ICT Support team who set up and took down the equipment in the Great and Small Halls, the staff who manned the service points at evenings and over the weekend, the systems team who worked to resolve the performance issues with the pre-enrolment system to a satisfactory conclusion and those who contributed in a range of other ways to ensure that registrations happened, documentation was available, student payments were made, invoices were raised, and passwords were sorted out. The University confirmed 'attendance' for 3,986 student – previous year this was 3,803.

Accommodation Management

Owing to the changes in upgrading the Accommodation management systems (Room Service), the software which translates invoice and credit note transactions from Room Service to the Finance system Powersolve had to be rewritten. The initial, bulk run completed successfully at the start of the academic year — invoices to the approximate value of £600k being loaded to the Finance system.

Calendaring Service

There was a major upgrade to the meeting maker service over a weekend. This provided a number of improvements to the way we access diaries with a web browser (including drag and drop) and also enabled a new way of synchronizing mobile devices with calendars which has a number of benefits – in terms of data security as well as ease of use.

Review of student PC clusters

As part of our plans to consult students over our services, a review of student cluster provision took place. We visited every cluster room supported by IT services with representatives from the Student Union team to do a condition survey. This was reported back to Estates and Facilities and, among other outcomes, it resulted in three refurbishment projects as part of the GTA upgrade program in Summer 2009.

Network Improvements

Previously the University's dual links to YHMAN (one to Leeds, one to Huddersfield) were both located in JBP Building and linked to the campus network via a single University firewall. This presented a significant risk to continuity of the University's business if disaster was to occur in that building. Therefore in August 2008 the primary YHMAN link was moved to School of Management, and a second firewall was installed at that site. YHMAN funded a new campus-to-campus link for their network traffic. Using some of YHMAN's equipment the University was able to fund extra equipment for Bradford's campus-to-campus network traffic, increasing the bandwidth available to and from Management by a factor of 10. A complicated project that involved staff from the LSS Systems and Networks teams, working in conjunction with YHMAN and contractors Affiniti, Virgin Media and BT, as well as firewall suppliers Vistorm and staff from the School of Management and Estates and Facilities. Further improvements to install a second Management to City campus link to improve resilience are in progress.

Large Display screens

IT Services with support from colleagues in Estates, launched a plasma screen at the School of Health for the New Year. This was followed up with new screens installed in The Hub, and an agreement to develop the new web content management system to deliver information consistently to all large information screens.

Increasing Data Storage Capacity

Additional data storage capacity was added to the Novell systems which relieved capacity problems in various Schools including Management and Health. New data storage capacity was also added for the G and H Drives in Learner Support Services and the rest of Corporate Services over a weekend without service interruptions

Electronic Mail Services

IT Services delivers around 400,000 messages each week, so around 22 million this year. We currently reject around 95% of email that is sent to us because it is spam. If we didn't do this then we would have to have a much larger primary email system. The AntiVirus software and hardware system costs us around £10k per year. The total cost of this service is about £70k/year, or about 1/3p per delivered message.

Green Computing

A power management solution was implemented which affects all of the student PC "clusters" located in Richmond, Chesham and JBP Buildings. The total number is around 350 computers. A web page provides students with the locations and availability of all these computers in real time and it can also be viewed on mobile devices (smartphone etc) and on plasma screens in the JBP Building at: <http://www.brad.ac.uk/lss/it-services/computers.php> and the information is re-purposed for mobile phones/devices at: <http://www.braduni.mobi/lss/pc/index.php>

Positive feedback on Office 2007 roll-out

A number of members of staff commented on the proactive and professional way in which the roll-out of Microsoft Office 2007 has been handled including the training and software upgrade components.

Successful launch of Computer Aided Assessment Sunray Cluster

This is a new facility on F Floor Richmond Building (room F42). Initial feedback on the pilot launch of the facility has been very positive although making it happen required a very significant amount of resources - people and computer hardware - and while the student experience was excellent there are many things to sort out before the service can be launched on a production basis. This was followed up, and the facility was successfully used throughout the Summer Assessment period. A significant part of this project involved personalised exam timetables. For the first time we were able to issue electronically by email individual personalised student exam timetables. These were issued to all students for January and May exams. For the May exams over 8,000 personalised emails were issued.

Major successful changes during Christmas "at risk" period

A number of major changes and upgrades were implemented during the agreed at risk period including launch of new data storage capacity (for staff filestore on Novell), upgrades to the email service, hardware upgrades to the SAINT test, development and web environments, and Blackboard software patches.

Service Status now more transparent

There were some service disruptions including a day without the email service and a service interruption during part of a weekend on the University web server. Many staff have commented on whether we could arrange for a day without email on a more regular basis. Seriously, this was a very major disruption and we are grateful to Geoff Bell and his team for resolving the problems without losing any of our emails, and also others who managed to keep excellent communications via the web and telephone to keep people informed. The new service status page was a huge success with thousands of "hits" at <http://www.brad.ac.uk/lss/it-services/status/>

Extending out of hours IT support in person

There was a "soft launch" of the NorMAN out of hours support service on April 6th. "Soft launch" means we did not publicise widely so that reasonable expectations can be set for staff and students of what can be done through a remote service point. The initial contract is for one year. This shared service is operated from Northumbria University and is a 365 day service covering weekdays 5:30pm through 07:30am and through the weekend and public holidays.

Finance system performance improvements

The computer servers were upgraded for main financial system (Powersolve) and the research grants and contracts system. This has enabled quicker overnight processing and better performance during the day. The upgrade has been successful and finance staff have commented on the improvement in the speed of response.

Technical improvements to better integrate data

The Openlink database connectivity software used by Business Objects 5 for Financial & Research Grant reporting was replaced with a more reliable solution. This removed a repeated

broken link error that interrupted the production of financial and research grant reports and also improved the speed of retrieval of the information. Unfortunately, because this change required Business Objects 5 to be refreshed on users PCs, there were initial problems on PCs with both Business Objects 5 and 6 installed. The refresh of Business Objects 5 stopped Business Objects 6 from working. This was due to BO 5 overwriting part of the Oracle 9i installation that BO 6 required. A refresh of Oracle 9i database connectivity software resolved this problem. This was a problem that could have occurred at any time on any PC with BO 5 and BO 6 installed if a refresh of Business Objects 5 was performed.

Environmentally friendly “pull” printing

This new service was launched at the Unity Building. The Pharos system combines printer and photocopying facilities for students and introduces a concept called “pull” printing. What this means is that students send something to print and then they release the print using a station located physically next to the printer they have selected. It should avoid piles of unwanted print outs on printers, saving some paper, and saving some students money on the paper they never collect. It also means that they can collect print at their own convenience at a time and place that suits them best. The roll out has commenced to centrally-provided student printers onto the Pharos system for the start of next academic session.

SAINT hardware upgraded

During the “at risk” period in December, IT Services moved the SAINT test and development services on to new hardware systems using a new “architecture” that is more resilient and provides better performance. This was followed up on Thursday 26th February and Friday 27th February when the “live” service was migrated onto new hardware components during the University 'reading' week. By completing the work by 2pm Friday it meant that e:Vision, online applications and enquiries were not affected over the weekend. The upgrade has been successful overall - there are a few issues that are being followed up including with third party packages/suppliers. Overall performance has been good and can be monitored at: <http://www.brad.ac.uk/admin/SAINT/servicestatus.php>. There were a lot of IT Services people involved in this exercise, and it also involved the SAINT Team in Academic Administration. A session is planned to pull together the lessons learned for such a complex undertaking to transfer knowledge to other system upgrades.

ICT Service Desk Annual Report

At IT Board, colleagues in ICT Support provided a comprehensive report on activity and service levels during the calendar year 2008. The report is available on the IT Services web site at: <http://www.brad.ac.uk/lss/it-services/support/reports/index.php>. The team were able to report that over 90% of jobs raised with them through our job tracking system (RMS) were completed within target, and that the total volume of jobs increased by 12% over 2007. In February 2009, the service desk team also began a new customer satisfaction feedback process which resulted in 5% of our customers responding to a simple information request when their job was completed. Over 95% of those who responded rated the service excellent or very satisfied. This customer feedback will be continued on a monthly basis and will be reported to the IT board. Thanks to Christine Thacker and Roger Goodair for putting the report together and for introducing these customer feedback initiatives.

Content Management System (CMS) and Web Team update

The e-strategy funded project on CMS is coming to an end and work is moving from a project status to an ongoing business status. The final activities of the project will be a final stage report and a project report which will include a section on the lessons learnt. The Press Office was prioritised as the first new site using the Site Manager product from Terminal Four. This has been developed and went live on 24th February; see: <http://www.brad.ac.uk/mediacentre/>. The Web Team has now been formed with the appointments of Paddy Callaghan as the Web Developer and Kate Wellham as the Web Editor. The Systems Team provided the technical lead on the project and the technical expertise to make it work.

Network improvements

There is a continual upgrade of the campus network which this year has seen a number of resilient links installed and improvements to the network in a number of buildings. During the year this included the installation of resilient links to Phoenix building, Pemberton building, and the campus telephone switch room. In addition, a new "Communications Room" was built in the closed stack of JBP Building to facilitate the removal of networking equipment from level 01 JBP Building as an enabling work for future refurbishment in the building

UCISA National Conference 2009

During March (March 11-13) there was an annual management conference for the Universities and Colleges Information Systems Association. Graham Hill was elected to Chair the conference and organizing committee for the three years commencing 2009. There was a parallel poster session taking place this year, and John Dermo provided a poster and represent Bradford University to promote the Computer Aided Assessment project funded partly by the JISC which was launched in January. The conference includes an exhibition with over 60 key suppliers to Higher Education and this was one of many events and seminars taking place around the conference programme.

Change Management Project – Jermyn Consulting

Jermyn Consulting has completed its analysis work and reported initial findings around business continuity. There were 16 Interview and workshop events that took place involving academic schools (Management, Health, Life Sciences) and Corporate Services (Finance, Academic Administration, Estates and LSS). The main objective was business continuity and by focusing on the services and processes that IT supports (rather than the "systems") the conclusions will help us to prepare service agreements which will identify Recovery Time Objectives (time to restore a service after a "disaster" takes place) and Recovery Point Objectives (time between data backups). The report also compared our capability with three years ago when a similar exercise was conducted. We have made progress in some areas and the overall trajectory is improving, however, there are areas which we need to tackle.

New Furniture in JBP Building and GTA refurbishments (PC clusters)

For the first time in recent memory, there has been a significant investment in new furnishings. Around 120 new chairs installed during the Easter break in PC cluster areas, and also replacement desks and chairs for all those staff offices where there had been a Health and Safety risk identified. Students have appreciated the changes. Over the Summer, three PC clusters outside JBP Building (Richmond J and L floor and Chesham C Floor) are going to be refurbished by Estates as part of a £50k package with new flooring and redecoration and repairing a number of issues identified during site surveys. This probably would not have

happened without the feedback from the student survey of PC clusters we conducted earlier in the year, and the acknowledgment that PC clusters should also be classified as GTA (this had been overlooked in the initial Estates refurbishment program).

Virtual Hub Nearing Completion

This is one of the e-strategy funded projects. In the last month new signage has been installed at the entrance to the Unity Building. It reflects the style used in the Hub in Richmond Building for the Unity Reception and “nano-hub” area – where there are Sunrays, telephones and furniture to enable students to interact with the main hub and other IT services without visiting the main campus.

IT Services Student Survey 2009

During May, The Oxford Research Agency (TORA) conducted an online survey sent to a random selection of 1,000 students. It was designed to cover a number of performance indicators to be used as the basis for tracking research - this survey providing a baseline. The same survey has been employed for a few years at Sheffield University enabling comparator analysis. The full survey will shortly be made available on the IT Services website for comments and feedback. I'd like to thank the students who responded to the survey (14%) for providing us with valuable and constructive feedback. Some key conclusions from those who responded to the survey are:

- Usage of University IT facilities is high (9 in 10 students use PC clusters at least occasionally and 8 in 10 claim general use).
- 97% of students use their University email accounts, with 70% on a daily basis
- Usage is more frequent among younger students (aged 25 and under), and males more frequently than females.
- Four in five are satisfied with opening hours and availability of facilities. However, in three of the eight rated aspects our students are significantly less satisfied than students at Sheffield University (opening hours, reliability of systems and prepay printing service). A quarter of students are concerned about reliability of systems.
- Key improvements identified were increasing the number of PCs, increasing the number of printers, improving the quality of computer rooms, and increasing silent study spaces.
- Three quarters of students agree that IT resources and services are good enough for their needs and less than one in ten disagree. This is comparable with Sheffield.

We intend to review the conclusions, establish a series of recommendations, and publish those on the IT Services website in a format which is responsive to student feedback i.e. “you told us this.....we did that”. Hopefully we can have all that in place for the start of next academic session.

Change Management Project – Inspirational Leadership Course

A number of staff in the IT Services team attended the first of two, two-day events led by Robina Chatham. Robina had already been introduced to those of us that are members of the LSS Board as she has conducted two events this year in January and in June The first two day event was held on June 23 and 24th and the second event concluded in July.

Review meetings with Schools and Corporate Services

A further round of review meetings with Deans and Directors took place about 6 months after the first visits. These meetings are preceded by an email setting out the responses we have made to the issues that were raised in the first round of meetings and which have been circulated in the form of three “trackers”. There is a tracker for Academic Schools, Corporate Services, and one-to-one meetings with all IT Services staff. It is encouraging that in this series of meetings there has been more time to explain what we have been doing to improve services. There were also follow up meeting with the School Administrators, and introductions to the six new student sabatticals. This type of ongoing communication is going to be part of the emerging “account management” activity and has served a useful purpose in raising the profile of IT Services and providing an opportunity to present the many positive aspects of our service.

Announcing a new Finance Business Support System

There are a number of us who have been involved in different ways with the procurement phase of this project. The Project Board met to receive the final recommendations and analysis of the project team, and a decision was taken on the preferred bidder, subject to final contract negotiations. This procurement process has been extremely comprehensive and has fully tested the potential market, resulting in COA as the successful partner.

Staff Self-Service Administration

Another e-strategy project is almost completed – the move to a new integrated HR and Payroll system supplied by Northgate Systems. This has been a major activity for IT Services and during the last year a number of additional modules have been launched. These include absence management, health and safety, occupational health, recruitment and ‘MyView’. ‘MyView’ is a web-based facility that allows staff to view their personal data directly and without the need to contact the Human Resources or Payroll departments. At this first stage of the roll-out staff are able to log onto the system and view personal bank and address details, as well as payslips and P60 tax documents. Furthermore, staff are able to view current spine point and salary level – information that isn’t available on printed payslips. The final (printed) pay slip was issued during May 2009. Thereafter, it is the intention that printed payslips will be issued only to those staff without regular access to a University PC. A second phase of the ‘MyView’ project is under consideration with the intention of extending the service to make it possible for staff to edit their personal information (e.g. address or contact details) directly. This will allow staff to make important changes to personal information quickly and without a reliance on other departments.

Unique Sports Centre System

The new sports centre management system ‘Scuba’ was procured and installed on existing hardware to very tight timescales.

Blackboard VLE Service upgraded

During the “at risk” period in July, IT Services moved the Blackboard service on to new hardware systems using a new “architecture” that is more resilient and provides better performance. The upgrade has been successful overall - there are a few issues that are being followed up including with third party packages/suppliers. Overall performance has been good and can be monitored at: <http://www.bradford.ac.uk/lss/it-services/status/bb.php>. This exercise involved a number of people in the IT Services team as well as colleagues in TQEG and the

Blackboard team. Follow up sessions took place to pull together the lessons learned to transfer knowledge to future system upgrades.

Staff Reflections

- The sudden and unexpected news that Denis Mistry had passed away affected many of us, and also the many people that Denis supported as a colleague and friend. Denis enjoyed working with so many parts of the University during his long career and will be very sadly missed.
- The announcement of Sara Eyre's retirement from the end of July having completed over 3 decades of service to the University. Colleagues have expressed sincere appreciation for all that Sara has contributed to our University and the broader Higher Education community in such a long and distinguished career.
- Jill Bell received a 25 year service award. Congratulations to Jill and all those others who attended the celebration event, including Geoff Bell who has also completed 25 years. Nadarajah Thirugnanasothy (Thiru) will also be completing 25 years service this September.

Any Other Business

- The RoamNet wireless network has been extended in response to specific requests from the Theatre in the Mill, and the Horton D meeting areas. It has also been installed in new Sports Centre, Escalate, F42 Sun Ray cluster, Jazzman's, Granary and other teaching areas at School of Health.
- Email storage quotas have increased - in the first instance to 500MB as a result of the successful launch of new storage capacity.
- Exam Board Reporting is progressing well with new web-based reports completed for Undergraduates and a mock exam board held to test out the screen delivery of the information.
- There have been over 280 purchases of Microsoft Office on the "Ultimate Steal" promotion
- A business process review has been initiated for the complex enrolment and registration of new students onto the IT and Library services.
- We are in the process of reviewing our expenditure over the next two years and seeking ways to reduce operating costs. One of the opportunities identified is the Blackboard Content Management Module. The licence is due for renewal in November 2009 and costs about £45k per annum. A group of us are investigating alternative options.
- We are market testing process for the corporate mobile phone contract having secured a potentially attractive offer from a local supplier to supply and provide this service. This will take place over the Summer and could include provision for students as a potential option.
- It has been agreed to invest in replacement new PCs at the front of GTA lecture theatres that currently have PC equipment which is reaching end of life. This will be happening over the Summer co-incident with GTA refurbishments.
- We facilitated the new departmental scan station for Life Sciences as part of the move towards more departmental student record storage on epository and 'paperless' student files, with other schools to follow.
- In conjunction with the SAINT Team developed the use of eVision to pilot module and stage questionnaires online, replacing a paper-based system.

Graham Hill
IT Services
September 25, 2009 v 1.5

IT Services Annual Report on Sustainable Computing 2008/09

Executive Summary

IT Services has already done a number of things which support the University objectives around sustainability. This report provides a summary of the activities in the last year. It covers energy saving initiatives, purchase of energy compliant equipment, improvements to student printing, and a continuing reduction in the number of computer servers to run systems using new virtualisation technologies.

Key Areas in 2008/09

PC energy saving

During 2008/09 we have collected information on the power modes and use of all PCs in shared student clusters – each PC communicates with a central system which is collecting this information at ten minute intervals. It tells us whether PCs are in use, in standby or power off modes. We allow a period of up to 20 minutes in standby mode after a student has logged off to ensure a fast start up for the next user. In the past the PCs were “always on” as turning them off at the socket required someone to turn them back on. If PCs are turned off using the power on/off button they could not be remotely turned back on. Over the Summer, we will implement a new feature which will enable us to remotely power on machines (for maintenance purposes) provided at least one PC in each PC cluster room is turned on. Reports are now generated which monitor when PCs were last “maintained”. This maintaining function provides software updates regularly to operating system, software patches, application updates etc. The most frequently used PCs are maintained most frequently. At present, the maintenance activity takes place in the early hours of the morning and can take up to an hour and a half for a cluster room.

Purchase of energy saving equipment

IT Services continues to buy energy star compliant hardware which is certificated by external sources. In tender processes we specify energy efficiency as one of the selection criteria. We have continued to investigate low power processors and are currently recommending Netbooks for portable computing. These are lightweight devices suitable for browsing, email and word processing – and have the added benefits of extra battery life, low weight, portability and very low power usage. The monitors attached to PCs power save as a default after 20 minutes – these can also be set to individual preferences. The default power-saving settings are currently used for Windows XP systems when they are installed.

PC recycling

IT Services has always disposed of equipment at end-of-life responsibly. Recently we have tended to re-use and recycle equipment to other parts of the University where computing demands are less intense than the 24 hour shared PC cluster facilities. There are issues with recycling equipment that is out of warranty and uneconomic to repair, some are however retained for spare parts and broken machines are sent for recycling according to the WEEE regulations. The normal replacement cycle for a PC is about four years, with the first three years covered by warranty and the fourth year a parts and labour basis. We endeavour to extend the life of machines as much as possible e.g. by not always adopting the most performance-hungry applications. The University recycles about 500 PC units each year. We are currently working with other colleagues to extend an initial pilot project called “second life PCs” which will enable staff and students to learn new skills in PC maintenance and create a working PC from a machine that would otherwise be surplus to requirements.

Student Printing

During this session we have piloted “pull” printing at the School of Health Unity Building. This will be fully implemented in time for the start of the next session. This system has significant potential to reduce unwanted printing, and eliminates the need for separator sheets between print jobs. Printers are set to default to standby mode after about half an hour which provides a balance between the time taken to warm up to operating temperature (which includes test and internal dumping of toner) and the need to save energy.

Staff Printing

Similar defaults are set on staff shared use printers. IT Services has endeavoured to phase out the purchase of individual desktop printers wherever possible. This was particularly easy to manage when all equipment was being purchased via a Phoenix support contract. There is no longer any control over individual staff purchases that are not made via IT Services.

Server Virtualisation

The current status is that we have now implemented 55 virtual servers on 6 physical servers – currently this is mainly test and development services. Examples include car parking, ID Management, Directory services (LDAP), web servers, the RMS Help Desk system and staff print servers. This means that instead of the previous policy of running each service on its own physical server, a number of different services share the same physical equipment. There is an energy saving component, but the main drivers of this work are service resilience, availability and management.

Graham Hill
Mark Jones
Alastair Wills
July 21, 2009
Draft v.0.1

Major Service Interruptions and IT Services response in Academic Session 2008/09

Date	Problem	Duration	Impact	Cause	Follow up action
Jan 2009	Web sites unavailable	Max 40 hours (weekend)	Web sites unavailable over weekend. Service restored next working day – no data loss	Hardware fault	Service was moved to more resilient hardware July 2009.
Feb 2009	Power fault at Emm Lane		Local PC and network services unavailable – no data loss	Contractor damaged major power cable	Resolved via Estates and Facilities
Feb 2009	Blackboard unavailable	20 mins	Blackboard VLE unavailable	Disk full, manual intervention required	This requirement was resolved as part of July 2009 upgrade.
Feb 2009	Blackboard unavailable		Blackboard VLE unavailable	Disk full during backup procedure	This requirement was resolved as part of July 2009 upgrade.
Mar 2009	Power interruption on main campus	11 hours (overnight)	Data network removed from a number but not the majority of servers – no data loss	2 second power interruption during night – one UPS did not operate as expected	UPS resilience improved
Mar 2009	Power interruption on main campus	12 hours (overnight)	Central PABX and 7 local exchanges OK – lost all external incoming calls. Main campus could make external calls, but SoH, SoM and Science Park could not	2 second power interruption during night - Circuit board failure in main NTL/Telewest rack	Supplier fixed circuit board
May 2009	Directory server fault	8 hours (overnight)	Service access interrupted overnight. No data loss.	Fault on LDAP server	Re-start fixed problem

Date	Problem	Duration	Impact	Cause	Follow up action
May 2009	Email traffic	One day	Delays to incoming and outgoing email. No loss of data	Externally generated traffic	None
July 2009	Email related	Several days	E-mails not arriving at Yahoo and Hotmail accounts. No email lost.	University mail blacklisted due to compromised student email account	Contingency plan put in place
July 2009	Air conditioning fault in E60 Server Room	16 hours (overnight)	Blackboard service unavailable for most of one working day (Friday). No data lost in process	At some point in the installation of new air con units a number of existing air con units stopped working	Undertaking review of air con strategy and capacity