ISD Programme of Work 2011/12 – May 2012

Project reports

Improving the Physical Environment	
TV Studio refurbishment	The tender for the supplier for the TV Studio has been issued and is currently being evaluated.
Supporting Research	
Development of Research computing support service	The Research and Specialist Computing Support team have continued to develop the user education programme, running a further Science Faculty PGR PPD programme course in High Performance Computing, a seminar on scientific parallel programming and a presentation introducing high performance computing to researchers in the School of Economics. New Linux based services have been introduced including a new license management server and further development of Linux login server RCLogin with new user tools, as progress to the decommissioning of UEALogin1 continues. We have been working closely with our storage partners looking at a proof of concept for a research storage investigating an advanced technical architecture for a sustainable scalable infrastructure. The team continues to provide High Performance Computing resources, with an increase in the number of users and usage on Grace. See - Research computing, provision and support for a 160 node cluster used for high powered computing. A proposal for a project to develop research desktops and associated support services has been discussed with the ISD Research Board.
Development of a Virtual Research Environment (VRE)	RPlan has been updated, examples of these updates include a feed from MyIP, the University's Intellectual Property management system, and enhancements to the administrative tools. CIS and REN are currently testing an updated version of pFACT which holds the functionality to integrate with PMA. REN, with the support of ISD, are investigating the use of a REF plug-in within EPrints.
Managing Research Publications	It is clear that support for open access deposit of research is growing. Following the change in government policy towards supporting open access (as laid out in the December 2011 policy document: 'Innovation and Research Strategy for Growth'[1]), there has been talk in 2012 of an

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[1] Innovation and Research Strategy for Growth, 2011. (CM8239) London: The Stationery Office. [online] Available at http://www.bis.gov.uk/assets/biscore/innovation/docs/i/11-1387-innovation-and-research-strategy-for-growth.pdf Paragraphs **6.6 - 6.9** apply [Accessed 13 January 2012]

	'academic spring'. This phrase is being used to describe the growing movement among academics and research councils for wider open access. Further movement came in early May, when the universities and science minister, David Willets, announced a government initiative to make all taxpayer-funded academic research freely available online. This is expected to be 'live' within two years. The Library will continue to monitor and advise as these initiatives grow.
Supporting Education	
Education Board programme of work	**Video Streaming** The University currently has two video streaming systems in use: Mediasite and Helix. The former is using loan equipment but is under an agreement that extends to Spring 2013. The server has feeds from a number of lecture capture systems so a decision on its future retention and possible migration to UEA-owned servers will follow from the recommendations of the lecture capture work, during the 2012-13 academic year. **Online marking** A Project Board has been set up and met during March and April to clearly define the remit and scope of the project. Following this a small number of quick trials were started at the end of April, with academics using different technologies and devices to explore the pros and cons of online marking with real coursework examples. The impact on and implications for existing administrative processes and staff will also be examined. The results of these trials will be used to make recommendations back to the Board that will shape larger-scale trials to take place in the autumn of 2012, with final recommendations for a workable corporate approach to be made over the winter.
Supporting Enterprise and Engagement	
Supporting UEA Business Processes	
SITS Project	Since the reorganisation of teams within ISD last year and the co-location of the team into one office, the Team has been reflecting on enhancing working practices. A team-based approach to problem solving and to development has been implemented, which facilitates the sharing of best practice, improves the robustness of developments and ensures that knowledge of the various aspects of the system are shared through the Team. One example of this is that the team are working on development of Self Service Training materials, using technologies such as Captivate Completed Work We have completed the first two phases of implementing Hobsons to support both PG applications and applicant enquiry handling. We have undertaken two upgrades of SITS with minimal downtime – we are now running the latest version of SITS (8.5.0). Work has been undertaken to standardise the upgrade process and the way we schedule this – with an objective of publishing upgrade dates in

	the Almanac We have undertaken various pieces of work in relation to timetabling – implementing better support for co-timetabling, as well as various other enhancements. In addition we have: • Revised student automation for withdrawal of a student • Online PPD "module" enrolment for PGR • Archiving / Data Storage (ongoing) • Review of Client Security Model • Self-service Council Tax Certificates • Implementation of Tribal fix to address changes to Bulk Data Transfer to UKBA The Team have continued to provide support for annual processes, including: • Online Module Enrolment • Training: Online Module Enrolment, Module Boards, Stage Boards, Timetabling • Preparations for Registration / Start of Year 2012 The following developments are in progress: • Ongoing support for further development of Hobsons Connect • Professionalism / Fitness to Practice (MED) • Higher Education Achievement Record • Key Information Set • Online Marking of Coursework • Specification of development required for New Academic Model • National Scholarships Programme / Bursaries • Delegation of administration of access to eVision and review of eVision security model • Extension of online module enrolment to new students • Automation for academic or financial suspension of students • Acronym changes (SWP) Disaster recovery – A DR and Business Continuity paper based test has been undertaken. This simulated various failure scenarios and sought to understand the state of readiness and contingency planning both within ISD and with LTS and the faculties. A report will be presented to the July SAS Development Board. Full reports on progress, priorities and key decisions are made to the SAS Development Board, minutes being circulated to ISSC.
Voice Over IP	The VoIP phone roll-out for the final year of the project is progressing, with EDU, ENV and CRU, CMP, MTH, Accommodation, Islamic centre, Chaplaincy, DOS, Drama, Music, Careers, Sportspark, Estates and most of Catering, BIO and BMRC compete. SCVA is in progress. The rollout is on schedule and it is planned that the remainder of campus will receive their VoIP phones by the end of May, brought forward from the end of

	July.
	Replacement of the old VoIP handsets with new ones, agreed as part of the compensation package by Siemens, is underway and it is intended that this will be complete by the end of May as well. At that point we will only be left with specialist devices (faxes, emergency phones, text phones, conference phones etc) left on the analogue phone system.
	We are currently in discussion with Siemens regarding a software upgrade of the system. This will have implications for the installation of the new switchboard system as it will be a different system to the one due to be installed under the project.
	The CIS development team is working alongside Siemens' engineers to implement a database link so that the call logger data will be used to automatically update the caller ID names on the phones, removing the need for separate manual updates.
Ensuring Service Availability	
ICT Security Project	A programme of work is underway that concentrates on completing activity that has limited or no funding requirements. The majority of security deliverables are now being embedded into team plans to aid streamlining the management of items. Core items such as auditing and penetration testing are still being conducted by the security project team. **Security Project Deliverables & Risk Paper:** has been started and should be completed and sent to members of the project board soon. **ENV Data Questionnaire**: Currently we have had 137 (44%) responses. These are being collated into one spreadsheet to allow for data analysis. **Information Assurance and Risk Management**: 7safe have provided a proposal which has been passed on to be presented to the IT Strategy group. If agreed then all work and the final report will need to be presented to the IT strategy group for 24th April. **UEA London Audit & Pen Test:** both the penetration testing and auditing has now been completed and reports passed back to UEA. A meeting to review these documents and decide next actions will take place on 17th April. **ENV Scientific Equipment Audit:** The asset inventory and audit has now been completed. This is being reviewed for vulnerabilities and actions to take place. 7safe will be used to perform penetration testing in key areas. **Network Segmentation Workshop:** The workshop has taken place with representatives from ICT and CIS. We are currently waiting for the final report from 7safe. Initial feedback from the session indicated that there is not a clear and easy method for implementing a short-term solution for creating a secure zone.
Server Virtualisation Project	The focus for this project continues to be on reducing the resource required for server deployment and providing additional resilience and

	agility.
	We are now focusing on provisioning additional virtual hardware for the physical servers that we will be at the end of their life cycle this year. In addition to this we are also ensuring that where possible additional server requirements that can effectively be run from a virtual infrastructure are provisioned as such rather than purchasing physical hardware. A number of such servers have now been provisioned and are providing service as expected. Additional licenses and hardware have now been ordered to expand the capacity of the solution.
	Our chosen solution for presenting storage in this environment, the commonly adopted IBM NSeries filer gateways presenting the storage to VMware, has now been fully implemented. All of the existing data, which was temporarily hosted using our existing filer gateways, has now been fully migrated to the dedicated filer gateways. The gateways have been configured to mirror data provided to the virtual hosts across both of our data centres to ensure that critical services can continue to run in the event of one data centre going offline.

Service plans

The ISD Strategy 2008-13 identifies eleven keys areas or groupings for ISD service delivery; the table below summarises activity in each of these areas.

Library resource provision, including management of the physical and electronic collections and information skills training.	At a time when there is increasing pressure on all of our library spaces, we are working on the refurbishment of a room (ARC 5) on Floor 02 which is currently 'closed access'. The objective of the refurbishment work is to start to make space for potential new study spaces in the library by relocating some journal stock from Floor 01. In addition to relocating stock, this newly refurbished space will be opened up for silent study, accessible to all students. The work is planned for completion in early September 2012.
	The Library has recently launched a Twitter feed to communicate more effectively with the wider community. Although we regularly roll out new services and initiatives, our biggest challenge is to ensure that people become aware of them. We cannot expect all our users to look regularly at the library's web pages, so Twitter offers the opportunity to reach large numbers of people directly. Launched in February, it has proved a success.
	Twitter has been a great tool to promote the 'More Books' campaign. We have also received positive feedback about the campaign through 'tweets' to the library. 'More Books' has been devised to give more power to our users so they can tell us directly what they want the Library to purchase or if we need to get more copies. The initiative has been very successful with over 200 books bought. All of these purchases are new titles and additional copies which would not necessarily have been identified for purchase otherwise. We plan to continue with the initiative in the next academic year.

	Running alongside the 'More Books' campaign has been the project to increase deposit of reading lists. Starting with a base of around 200 reading lists, we have now increased the deposit to over 700. This has enabled us to be more proactive in ensuring that we have resources in stock in appropriate numbers at point of need. Despite support from the Library Forum and the ISD Education Board, our CUBS bid to purchase the Talis Aspire reading list software has not been successful at this stage. This was due to competing resource needs within other parts of the university. We now plan to consolidate our work in depositing reading lists over the next year with the expectation that a future bid will be successful.
IT infrastructure in teaching spaces, including IT teaching areas, 24 hours IT area, self study spaces and AV services in lecture rooms.	Both of the desktop development posts have now been successfully filled. Initial training and familiarisation processes are now taking place. In addition to this a review of our approach to desktop and application deployment is being undertaken. A number of key areas have been identified for improvement and the initial work to facilitate these changes is now underway. Included within this work we are implementing a solution to ensure that non-Microsoft 3rd party applications such as Adobe Flash and Reader are patched regularly in addition to the monthly Microsoft patches. Early tests have proved successful and a limited pilot within ITCS will follow prior to a wider campus-wide rollout. Requests for desktop developments are now being progressed again but there may be a slight delay whilst we deal with a backlog of issues and requests. Initial investigation regarding a deployment of Windows 7 Service Pack 1 has now been completed and a pilot rollout to ITCS has been successful. We will be looking to deploy this campus-wide towards the end of May. We have been working with the Library to try and resolve a long standing issue with the download/viewing of Science Direct PDF documents. Initial investigation indicates that an upgrade to Adobe Reader fixes the issue although the way in which these documents have been authored could also be a factor. An upgraded version of Adobe Reader is due for deployment in the next month, once testing has been completed.
Staff and student enquiry services, including IT helpdesks, Library helpdesk.	The 24/7 opening hours pilot has been well received by students and has no doubt contributed to the 11.4% year-on-year increase in footfall so far this academic year. We have closely monitored all aspects of the pilot and gathered both quantitative and qualitative data which will be used to help inform decisions as to whether this pattern of opening hours continues beyond the end of the pilot this summer. Exit polls have been conducted in February and again in May to provide detailed information about the types of student making use of the building overnight.

	The Library was open, for the first time ever during the university closure period at Easter. Over 2350 'unique' individuals made use of the building during this period and we had a total of almost 8500 visits and 2147 items were borrowed. At its busiest there were over 350 users in the building, making use of the full range of resources and facilities available to them. We are facing particularly heavy demands on the study spaces and facilities in the Library during the main university examination period. We have therefore implemented daytime patrols to try to ensure that the building remains a welcoming and purposeful working environment for all users. The patrols help deter any inappropriate behaviour and also discourage the 'reserving' of computers or study desks. We have also introduced a Noise Line, which allows users to text Library staff to report any noisy or disruptive behaviour, so that we can intervene to ensure the Library remains an area conducive to study. We continue to do what we can to ensure that the fixtures and fittings in the building are fit for purpose and are pleased to report that all the chairs in the IT labs in the building have now been re-upholstered and some of the original 1960s tables and chairs on Floor 01 have been refurbished with funding allocated by the Alumni Association. We have also ordered an additional 40 stacking chairs which can be used at times of peak demand to help alleviate the problem of lack of sufficient study spaces in the building at peak times. In the longer term we hope to get support from the University to fund our plans for additional study spaces. We have also been looking at aspects of signage in the building in response to comments received in both the ISD and NSS surveys. This includes work to: increase the visibility of the re-shelving shelves on the reading floors, signage by the catalogue PCs to show which floor each class mark can be found, and some new pull-up temporary signs designed to help new students orientate themselves more easily at the beginning of the new academic year. We continue to work closely with other support services across the university, in particular LTS and DOS. This collaboration has recently resulted in a successful outcome from a referral to the university disciplinary process – a student was fined £100 for the attempted theft of a library item. Other work undertaken includes a major review of processes around the High Demand Collection, work on improving the reliability of the self-service equipment, and working with colleagues across the university in preparation for the start of the new academic year.
IT infrastructure, including two computer	Phase 2 of a two phase project to vault our TSM backup tapes to our second tape library in Data Centre 2 is now completed. Additional

suites providing resilient email, filestore, backup and authentication services.	tape drives have now been purchased to allow us to increase the capacity of our tape library but it is likely that further drives may be required over time in order to keep pace with the volume of data being backed up from central file store. Work with our storage partner Tectrade and supplier IBM has continued to ensure that research file store meets the requirements of its users. In particular we are working to ensure that our current technical ceiling of 50GB quotas can be exceeded as well as better integration with Research Computing services. A proof of concept solution is now in the process of being developed and implemented. If successful this will provide us with the storage facilities that researchers have been calling for including significantly higher quota limits. This work is embedded in the restructuring of personal Central File Store which is due to commence over the Summer vacation. Although remaining staff and postgraduate researchers using the old Student email service were migrated to the Staff Exchange service towards the end of last year a small number of accounts on a mail server in Maths still remain to be migrated. We are working with IT Support and Maths to ensure that this process is managed with end-users' needs in mind. In addition to that around 20 returning students have been identified who also require migration. We expect to have completed these migrations by the end of the week commencing 7th May. Work to migrate all email users to Exchange 2010 has now started. This allows for increased staff and PGR quotas of 2GB due to savings made in the type of SAN disk technology being used. Future growth in quotas will also be possible due to the significant changes to the server architecture of the solution. The full version of the Outlook Web Application (OWA) will also now be available to a wider range of browsers and operating systems. Exchange 2010 also enables any potential move to a hybrid or blended solution involving both locally and cloud hosted services. Detailed planning for this started in early February and initial implementation, which should have been transparent to the end user, was started in late March. While the change was well planned and communicated the impact that it had was not expected. While the vast majority of users continued to send and receive email without issue a sizable proportion had issues with mobile device synchronisation, web access and Mac OSX clients. Every effort was made to try and resolve these issues as soon as was feasible but often one fix caused other issues to arise and frequently these issues were difficult to replicate. During this period we continued to communicate with the IT Helpdesk and IT Support to ensure that they were kept abreast of the situation. Documentation regarding workarounds and solutions was provided as soon as it was available. The issues were largely resolved just after the Easter vacation and we worked directly with those users who were still experiencing issues particularly in the Google Chrome

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browser. Presentations explaining the remaining changes to the email service were held on 30th April and 1st May with wider communications to the University due to be sent on 3rd or 4th May. A small number of pilot users have already been migrated to ensure that this process can proceed without major issues and IT Support staff are due to be migrated in the coming weeks. Bulk migrations are due to start week commencing 14th May with those users due to be migrated being emailed the day before. This process will take place during the day, ramping up to 400 mailboxes a day at its peak, and will be transparent to most users.

Email mailing lists are still in the process of being migrated to Exchange. Once completed this will mean that all mailing lists will be provided by a common platform reducing support costs and management considerably. Once migrated, lists will be managed by the UEA Identity Management System and the existing Mailman and text-based list facilities will be decommissioned along with the legacy email servers. The revised mailing lists will provide much more granular control over who can send to mailing lists and this will be implemented to ensure that only those that need to can send to lists.

The implementation of mobile synchronisation policies to secure mobile devices that synchronise email with the UEA Exchange service was started in early February and due to finish on the 14th May when any remaining user accounts will have the policy enabled. Some resistance has been expressed at various levels during the implementation of this change and we have worked with the IT Helpdesk to try and address this.

Data Centres
The Data Centre team is not expected to be fully resourced until January 2013. To mitigate against the impact of this duties and responsibilities have been redistributed to remaining members of the team. However at times the team will not be able to respond in a timely fashion.

Works continues in Data Centre 1 to align the server racks in a way that will allow improved cooling. This work is required before any work can commence on refurbishment of the air cooling within the room.

A proposal on Data Centre power efficiency has been made by the Data Centre consultancy company FutureTech. Their proposal has submitted as part of a Salix bid by ISD and Estates to secure funding to fund for the changes. We are currently waiting to hear the outcome.

All Windows servers now have Operating System hot-fixes and security patches automatically downloaded and where possible automatically installed. This means the all Windows servers will

| | receive and have updates installed within 4 weeks of the updates being released.

Windows servers running an older version of the McAfee Virusscan software have been updated to the latest version to ensure they stay within the Mcafee support matrix. Once all of the servers have been updated the server that managed the older version of the software will be decommissioned.

Seventeen servers have been decommissioned and a further 5 set aside for reuse. Six new servers have been commissioned to support Exchange 2010.

Work has started to ensure that the construction of the new teaching block (Building 57), next to Data Centre 2, does not impact on our ability to deliver services from that Data Centre. The work will protect the electrical power and data cables that serve the Data Centre as well as ensuring that all necessary steps are taken to ensure that any vibrations created during the construction of the building do not exceed equipment manufacturer's recommendations. |
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| Network and Telephony, management of the internal network, external network links, and telephony. | Power-over-Ethernet switches have been installed into the Student Union, BMRC, MTH and CMP/EDU in support of the VoIP roll-out. Preparations have been put in place regarding enabling additional campus resilience.

The replacement DNS/DHCP solution is currently on hold whilst the details of the remaining migration are agreed with the supplier. Once the migration process has been agreed the migration of the main campus sites will be initiated (residences and wireless are already using the new system). |
| Research computing, provision and support for a 160 node cluster used for high powered computing. | Usage on Grace has increased significantly, with an increase in new users and many more users migrating from ESCluster, which has seen a general reduction in usage. Demand for storage on the HPC clusters has been high, with additional storage allocated to a number of departments home and scratch directories.

In April, HPC users were surveyed for feedback on the current HPC provision, as well as looking at research HPC requirements for the future with the prospect of Grace phase two development over the summer.

Work has started on the upgrade of Platform Cluster Manager, the HPC software stack, which will provide support for latest hardware; resolve minor issues currently experienced with administrative tools; and significantly provide enhanced user experience through HPC web portal tools. A number of nodes have been taken from the cluster to form a test base for the upgrade, which will be rolled out before the forthcoming hardware upgrade.

In April, following an air conditioning failure in the data centre |

	housing HPC kit, all unused nodes of both Grace and ESCluster were shutdown to reduce heat build up. Impact on users and running tasks was kept to a minimum and all services were returned after a short period. A storage space issue affecting ENV HPC home directories resulted in a number of jobs failing in late April. The issue was resolved in less than 4 hours and services resumed.
Teaching systems including the VLE, Portal, Library Management System, and some specialist teaching software.	Both Blackboard and the Library systems have had database upgrades applied. This completes an 18 month project to bring all corporate systems onto the latest release of Oracle software. We have taken the opportunity to review data storage, retention and settings to further reduce our data storage requirements, improve security and resilience and enable more seamless refresh of our test systems – this will enable us to provide more rapid testing and development on these environments. Following testing of a mobile VLE application ISD submitted a CUBS bid for funding which was declined – we will continue to monitor this space to look for future opportunities. ISD teams are currently using the recently installed SMS text message service to pilot its use with some specific modules. With the rollout of OpenAthens the major upgrade major upgrade to the Athens service will be taking place over the next 3 months. We are working to enable single sign on to internal library systems and external resources.
Administrative and web systems, including Finance, Student Records, HR, Estates and the UEA web site.	The migration of research websites and specialist content to the new Liferay content management system has been continuing. ISD successfully bid for CUBS funding to support the replacement of Polopoly with Liferay. Sever infrastructure has been configured, software purchased and installed, and we have started the task of migrating the pilot service to the live service delivered from the Liferay platform: see http://business.uea.ac.uk/ (This site also demonstrates the dynamic site adaptation to mobile devices.) We have begun work on specifying and developing the new Course Catalogue feed to Liferay – this is the first major development within Liferay – we will monitor progress closely. Marketing are overseeing the Polopoly to Liferay migration with Suzy Gook acting as project manager. ISD Successfully bid for funds to replace the current finance system since there are several components of the system which will become unsupported by 2014 – the supplier having no plans to

	further develop these. ISD has initiated a project to develop a requirements specification – including investigating into possible ERP solutions Work relating to HR involves the ongoing rollout of Electronic payslips – which is now a live service. Identity Management -Work to migrate mailing lists continues and is expected to continue for several more months as we liaise with list owners to close or migrate the various custom lists. We have linked the Identity management System with OpenAthens to enable password self help an anti phishing information as part of a standard logon process. We have additional linked the systems to enable the release of personal attributes required by our various electronic service providers – student voting rights for example
Faculty IT Support	**IT Support ProcessFix Service Review** IT support can be requested in person, via email, phone or through the IT Helpdesk. During February to the beginning of May, 2123 support requests were closed by IT Support. This figure excludes requests closed by the IT Helpdesk but it is also only a subset of the total volume of requests we receive as not all requests are logged. At the end of May the Helpdesk and IT Support will engage in a process review in order to define and improve the service that we provide. In the meantime, the web pages detailing the IT support arrangements have been amended so that users can identify who their IT support manager is. More detailed information about how the service is provided will be published following the service review and any changes have been made, as part of communicating the outcomes of the review to the wider community. **Windows 7** In January we reported that 62.8% of workstations appearing in Active Directory had Windows 7 installed. At the beginning of May we had upgraded or installed an additional 383 workstations with Windows 7. This now accounts for 81% of the estate. Further progress has been made in removing obsolete workstation records and we expect to complete the Windows 7 roll-out before the start of the next academic year. This will be achieved through a combination of upgrades and the installation of approximately 500 new workstations arriving at the end of the financial year as part of the ongoing hardware refresh cycles. **IT Support and Desktop Services Developing Better Tools** These two teams within ISD are working closely together to implement solutions to some long standing issues. Development of Microsoft's System Center Configuration Manager (SCCM) will allow technicians to utilise tools to improve the service we provide. These include the use of remote assistance tools and Systems Center Updates Publisher (SCUP) that will allow well used plugins, such as Adobe Flash Player, to

	be updated via a Windows update close to the point of issue rather than the more cumbersome method of packaging and deployment at set intervals. SCCM will also be used for software deployment so that we move away from software installs via Group Policy. This will have a positive effect in speeding up login times to PCs and will allow us to accurately calculate licensing requirements across the campus.
Audio visual services, including video conferencing, TV studio, off air recording and access grid.	**TV Studio** The procurement stage of the TV Studio project has continued during the spring; a number of tenders have been received which are being evaluated using criteria defined by the TV Studio Project Board. The Board is meeting on 14 May to review and choose a preferred supplier. We will then work with that supplier to finalise the project plans, costs and any associated works that are required, with a view to installation commencing in June. At present the project remains on track to be completed in September 2012. **Teaching spaces** Estates are leading on a programme of refurbishment of teaching spaces which aims to develop a standard or baseline specification and to pilot this in 10-12 spaces over the coming summer. It is envisaged that the IT/AV aspects of the standard will comprise a generic set of equipment or facilities that can be replicated across the campus, and then added to in certain areas where local needs require it. Consideration is currently being given to whether trials of lecture capture facilities could be incorporated into the pilot areas. The IT Support team are working with Snellings to define and cost a 'standard fit', drawing on their experience of working with other institutions. Wherever possible existing equipment that is still fit for use will be re-used within any refurbished teaching spaces. **Audio Visual support** In March we made changes to the way AV is supported across campus to reflect the differing requirements and demands. It was clear that a distinction existed between equipment that can be supported by IT Support technicians and that which requires more media or production based skills. In order to simplify the service we have moved staff resource within ISD so that we now have the IT Support team and a separate one dedicated to media activities that we are referring to as the 'Studio Technology Service'. Further work will take place during May and June to update webpages and to liaise with stakeholders to explain these changes. The outcome will be that queries will be dealt with much quicker and that someone will be available to discuss requirements for conference or events that require media and production support. During May we will also review the way emergency support will be provided across campus to ensure a rapid response.
Print group services.	Print Services carried out a series of performance measurements during March to better understand the nature and volume of work requested from the service. Users were asked to state their

	preferred timescales for work to be completed and we found that we met or exceeded their expectations in over 96% of cases. Many of the remainder were delayed only because work was not collected, so the service continues to perform very well. The processing of online coursework has been accommodated within existing resources and the service is capable of managing increased throughput anticipated this semester.