

A fresh look at our computing services

We are witnessing an explosion in computing and information technologies that is creating an all-pervasive infrastructure on which society at all levels – and the University in particular – is becoming dependent. All aspects of our business will soon be conducted by mobile staff and students via a digital information and communications environment accessible from anywhere, which is also our primary interface to the rest of society.

Research excellence will increasingly depend on our ability to transform vast data sets from diverse sources into knowledge, often involving simulation by powerful computers. Those universities which lead the exploitation of the latest technologies will gain significant competitive advantages.

Last month the *Times Higher Education Supplement* ranked this University 30th in the world and 9th in Europe. We are better than this at computing! We have an exceptional combination of strengths in informatics and its applications. We lead the UK, and arguably Europe, in informatics research, HPC, e-science, data curation, computing technology transfer and training. We have made e-learning a strategic priority, and have already achieved a competitive edge in student recruitment. This suggests we can use our computing expertise to improve our world ranking.

However, we have not yet fully capitalized on our strengths. Rapid technological developments, coupled with escalating security concerns, encourage ‘Balkanization’ and complicate the formation of a corporate strategy. Our recent restructuring into Colleges was not matched by a review of the fitness-for-purpose of our computing and information services. Full economic costing demands greater transparency in the costing of computing infrastructure and its support. Other universities are responding to these same pressures by initiating reviews and restructuring. Our Knowledge Management Strategy is successfully capturing and prioritizing our user requirements, and providing us with a service definition. We now need to know if our computing strategy, organizational structure and financial mechanisms are optimal to deliver it.

High-level strategic review

The review I will carry out next year will be wide-ranging – encompassing computing and information services provided centrally, by Colleges and by Schools – and adopt a Prior Options style, questioning the need for services at each level, as well as their mode of delivery.

I will be assisted by Vicki Bruce, David Dewhurst, Helen Hayes and Nigel Paul. We will set up working groups and consult external experts. Our deliberations will be open to everyone, through the University website; input from anybody will be welcome at all stages. We aim to report in September.

This will be the first of a sequence of quinquennial reviews, so we don’t have to solve every problem, but it is time to start ‘thinking out of the box’.

Richard Kenway

(Assistant Principal, High-performance Computing and e-Science)

“The review I will carry out next year will be wide-ranging – encompassing computing and information services provided centrally, by Colleges and by Schools – ... questioning the need for services at each level, as well as their mode of delivery.”

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Access to University computers: how authentication works

The University recognises four categories of ‘user’: staff, students, alumni and visitors. Each of these categories has its own single master database which holds the ‘golden copy’ information about each individual person. The information from these databases, along with the University’s Organisational Hierarchy, is fed into the Identity Management System (IDMS) which in turn drives the gateways – such as Active Directory (AD) and EASE – which regulate access to the University’s various IT systems and computers. New users cannot be registered directly with AD or EASE, but must be entered into the database appropriate to their user category, from which single point they are known throughout the institution.

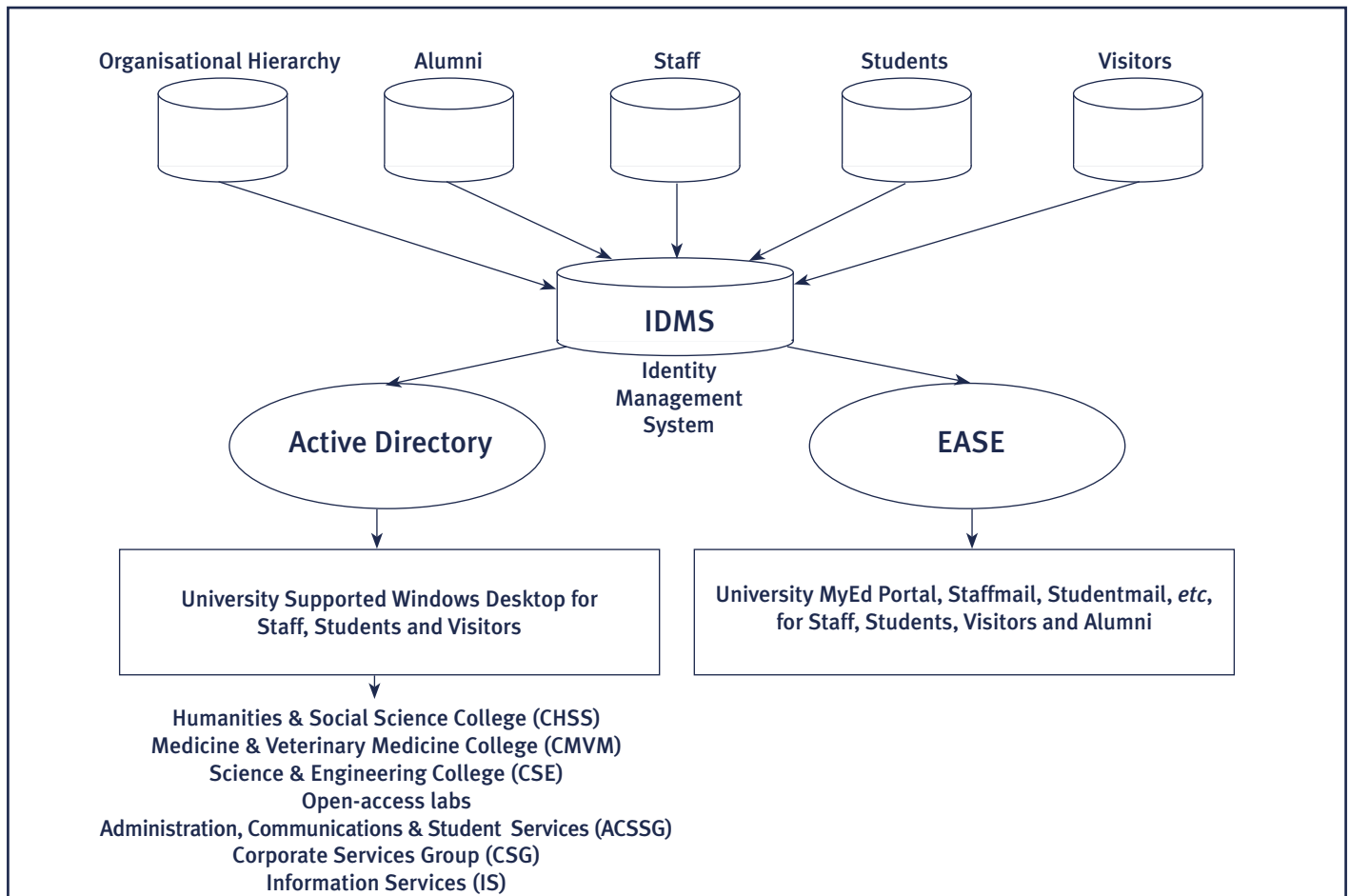
Active Directory controls access to individual desktop computers, such as PCs using the University’s Supported Desktop system (including all the open-access lab computers), and is used by staff, students and visitors. Core services such as anti-virus utilities and automatic software updates can be specified for all users, while relevant extra services such as lab software can be added on as required by Schools, Colleges and Support Groups. EASE is used by all four groups of user, and gives single-signon access to a wide range of Web-based services – such as Staff and SMS mail and the EUCS Call Management System. The MyEd portal uses EASE, and provides further reduced sign-on to WebCT and Library Athens resources.

All users should be using their UUN (University UserName) for all these services, together with their AD or EASE password (EUCS is investigating the possibility of linking these two passwords).

All the components of this authentication system are now robust and reliable. Future work will be directed to improving some aspects of the interfaces and to add a fifth category of user, ‘eVisitors,’ users who don’t have a formal connection with the University but who want information about it, such as availability of accommodation.

The intention is that all categories of user should have easy access to resources relevant to them via the MyEd portal. If you can’t access MyEd, get in touch with MIS for assistance (email misusers@ed.ac.uk)

Bryan MacGregor (MIS)



Major boost for OGSA-DAI

An Edinburgh research team that created software used by scientists around the world has received follow-on funding of £1.86 million.

The OGSA-DAI project, based in the University of Edinburgh, is driving forward the complex area of scientific data access and integration, which could lead to better ways of screening for cancer or predicting destructive weather events.

Since 2002, OGSA-DAI has been developing 'Grid middleware,' the software that supports the pooling of very large digital data collections and major computing resources, wherever in the world they might be. This is known as e-science. OGSA-DAI middleware is now used worldwide to support a whole raft of e-science projects. The project's development and research team is based at EPCC and NeSC, at the University of Edinburgh.

A 'computing Grid' is made up of geographically dispersed computing resources linked together by software known as middleware so that the resources can be shared. The aim is to provide computing resources to the consumer in a similar way to the electric power grid. The consumer can access electric or computing power without knowing which power station or computer it is coming from.

The £1.86m grant gives an additional three years' funding for the Edinburgh team, and will sustain support for 1,500 registered users and major applications such as – in the US – Cancer Grid and the LEAD project which focuses on real-time data collection to predict tornado formation, and – in the UK – AstroGrid, an open source project to create a working virtual observatory

for British and international astronomers.

The grant is part of a three-year, £3.8m investment by the UK e-Science Programme to establish the Open Middleware Infrastructure Institute-UK (OMII-UK). Three UK universities – Edinburgh, Manchester and Southampton – will pool their expertise, experience and resources gained from working on many other internationally-recognised and successful e-science projects.

Together these three centres represent a community of some 6,000 users. By combining the centres' expertise in OMII-UK the e-Science Core Programme is establishing a powerful source of well-engineered software, enabling an integrated approach to the provision of more advanced tools than before, better tuned to the requirements of the research and development community. OMII-UK will provide a significant basis for international collaborations and standards, empowering new research and advances in a wide range of disciplines.

The UK e-Science Programme is a coordinated £230m initiative involving all the UK Research Councils and the Department of Trade and Industry, with an extra industrial investment of £30m. The Programme as a whole is fostering the development of IT and grid technologies to enable new ways of doing faster, better or different research, with the aim of establishing a sustainable, national e-infrastructure for research and innovation.

The OGSA-DAI website is at <http://www.ogsadai.org.uk/>

The OMII-UK site is at <http://www.omii.ac.uk/>

Tracy Peet (EPCC)

Collecting RAE publications

The Library has created an online repository for RAE Publications, for Schools and Colleges. You can find out about this in the 'News' section of *Library Online*, at <http://www.lib.ed.ac.uk/news/raepubrepute.html>

Some Schools have already run mock RAE exercises to gather lists of publications. Where such data already exists, we plan to import it as the initial input into the RAE Publications Repository. We will be able to load data automatically, then modify and extend it to fulfil the criteria set by the Funding Councils.

All Schools will be provided with a template to use so that publication data can be imported into the RAE Publications Repository. Data can also be added directly into the repository through a user interface.

All comments are welcome! Please email colin.watt@ed.ac.uk or claire.knowles@ed.ac.uk.

John MacColl (EUL)

Collections Calendar 2006

The calendar features images from the highly successful Object Lessons exhibition held in 2003, covering the broad spectrum of University activities as reflected in its historic collections. Images include Crum Brown's model of Rock Salt, photographs from the Medical School Anatomy Museum, Fleming's Penicillin, Raeburn's portrait of William Robertson, and Ortelius's engraved map, *Scotiae Tabula*.

The calendar is on sale, for £8, at the University Shop, Talbot Rice Gallery, IS Helpdesk and some library sites. Proceeds from its sale will be used for conservation and care of the University's wonderful collections.

There is further information at <http://www.lib.ed.ac.uk/news/calendaradvert.html>

Sheila Cannell (EUL)

“Clickers” in large lectures: making it work

The introduction of electronic voting systems (sometimes called ‘personal response systems,’ or more colloquially ‘clickers’ after the hand-held units used to register votes) has the potential to effect radical alteration of the traditional content-delivery mode of teaching in large lectures. More than a novelty-value gimmick or application of technology looking for an academic purpose, their use has been extensively trialled and documented. For recent discussions within Edinburgh, see a previous *BITs* supplement (<http://www.elearn.malts.ed.ac.uk/links/LTS/LTS14.pdf>) and report from an e-break (<http://www.elearn.malts.ed.ac.uk/issues/news/ebreakso405/ebreako6.phtml>) for a comprehensive and compelling summary.

The 2005 round of the Principal’s e-Learning Fund supported a joint project between the Schools of Biological Sciences and Physics to implement the use of a clickers system in large first year undergraduate classes. Currently, ‘Physics 1A’ is using an installation of the **Interwrite PRS** system (<http://www.gtcocalcomp.com/interwriteprs.htm>) identical to the original one purchased by MALTS, with ‘Molecules and Cells’ introducing the technology next Semester. Here I report some of the challenges (technical, organisational, pedagogical) in using the system on a scale of hundreds of students as a regular component of lectures, during which students are faced with multiple choice questions to challenge their conceptual understanding of material.

The technology is at the simple (and cheaper) end of the spectrum of what is available. It is based on infra-red signals, rather like a TV remote control; the clicker must be pointed at a receiver. Following advice from an experienced user of the same system in Glasgow, we quickly realised that the technical issue of siting the receiver units correctly was critical to the operational success of the system. Within a week of our desperate plea, MALTS had cabled the Appleton Tower lecture theatre, and installed four widely-spaced receivers.

So we had a ready-to-use system at the start of the Semester, but we had absolutely no way to test the signal load on the receivers until 250 eager first years arrived. Having handed out the clickers to the students, on loan for the duration of the course, it was with some trepidation that I approached my first lecture using the system (I had a Plan B, the no-tech solution of coloured cards which we have used for several years in Physics 1A).

The lecture setup is minimal: plug the power and USB cables into a laptop (or, soon, lecture theatre PC), load up

the software, and start.

An issue with large classes is the need to keep the whole of the main data projection display free so students can see that their votes

have registered (they typically see the last three digits of their clicker’s serial number). This requires the question under discussion to be displayed elsewhere (in our case, the OHP).

The technical and organisational issues are small compared to the pedagogical implications of adopting such a system. The choice and suitability of the question asked is crucial: we avoid excessive calculation but test conceptual understanding. The collective *mis*-understanding of the entire class can sometimes be laid bare for all to see. I have a question on Newton’s Third Law; this topic, an old friend to the students having first encountered it at Standard Grade, yields consistently spectacular results. This year, there was an audible gasp from the class when I told them 90% of them had chosen the incorrect answer. Such active engagement with complex material is essential to confront (and, we hope, dislodge) such misunderstandings.

Including this as a regular component of lectures, perhaps even basing entire lectures around this type of activity, has inevitable implications for content coverage. The traditional A-Z exposition of the syllabus cannot be crammed into the remaining lecture time, and our view is that it must be available for the students elsewhere. Coupled to this is the resulting unpredictability of the lecture direction. If 90% of the class got a fundamental conceptual question wrong, can you really just move on to the next topic? This willingness to evolve the lecture



based on student feedback in real-time represents a 'horizontalisation' of the learning experience, with the lecture much less of a one-way (vertical) transmission of information.

As part of the project, we will seek and evaluate student comments on their experiences of using the clickers in both disciplines. Initial feedback is very positive: in the words of one first year undergraduate in Physics "*I find I am even having to think in the lectures*". Now that must be a good thing.

Simon Bates (Physics)

Excellence in Teaching and Learning

The Centre for Excellence in Teaching and Learning in Reusable Learning Objects was launched on 7th November. Partner institutions are London Metropolitan University, the University of Cambridge and the University of Nottingham. See <http://www.rlo-cetl.ac.uk/>

University of Ulster eLearning Conference

The 4th annual all-Ireland eLearning conference will take place on 19th January 2006 at the Jordanstown Campus. The aim of this one-day meeting is to raise awareness of the benefits of using online technologies to support teaching, learning and assessment, with particular emphasis on the inclusivity of e-learning. Further details are available on the Conference website at <http://www.ulster.ac.uk/staffdev/e-conference.phtml>

Wilma Alexander (MALTS)

eLearning awards

Excellence in e-learning was truly recognized on 13th October at the Royal Garden Hotel in Kensington, London at the inaugural 'E-learning awards 2005'. Staged by e.learning age magazine supported by the eLearning Network, these awards are set to be an annual celebration of e-learning excellence. For more information, details of how to apply for 2006 and to find out who won this year, see <http://www.elearningage.co.uk/awards/>

JISC Regional Support Centre

Courses for eLearning development

The MALTS eLearning team is offering more online staff development courses on eLearning topics.

All courses are wholly online, and run for six weeks. Participants need to spend a couple of hours a week engaged in course-related activities. However, because this is online, there is flexibility about when that time can be. Generally we would expect participants to 'drop in' to the course three or four times each week, rather than making just one long 'visit'.

Places will be allocated on a first come, first served basis. There is no charge for any of the courses. It is important that participants do agree to be fully involved over the whole length of the course, so please don't request a place if it is possible that you might drop out.

- **Course A: Introduction to e-Tutoring**

Dates: 16th January to 3rd March 2006

This course aims to develop the skills required to provide online support in the delivery of a learning programme. During the course, participants will experience online teaching and learning directly. They will become familiar with the experience of participation as a learner in an online environment (WebCT). Building upon personal experiences of teaching and learning, and critically evaluating the strengths and weaknesses of e-tutoring, they will develop skills in tutoring and supporting their own students in such online environments.

- **Course B: Objective Testing Online**

Dates: 6th February to 24th March 2006

Objective testing online can be much more than multiple choice tests. This course allows participants to engage with different objective testing tools and to discuss with colleagues their pros and cons in different contexts. It considers effective question design and exploitation of the wealth of statistical data collected by automated systems, along with item banks and an introduction to interoperability standards. This is a general course to help staff explore and consider options, not a detailed training course on a specific system.

- **Course C: E-learning Accessibility**

Dates: 30th January to 10th March 2006

Providing accessible learning opportunities raises issues which go far beyond writing valid HTML (although that's a good start!). This course looks at the bigger picture of course design for adaptability and accessibility, and examines IT tools and services to make courses more accessible. There is a particular focus on providing an appropriate student experience, and on using multimedia tools to facilitate learning for disabled students. The creation of this course has been part-funded by an award from the Disability Project Fund.

Bookings should be made via the training course booking channel on MyEd (by default this is on your personal channel), or you can email ellearnhelp@ed.ac.uk with your name, telephone number and School, stating clearly which course you are interested in.

Wilma Alexander (MALTS)

Software news

Exceed 2006

Exceed 2006 is now available from Software Services (email eucs.software.services@ed.ac.uk).

SPSS Licence codes

Yes, it's that time of year again – SPSS licence codes are expiring. Don't panic! SPSS should continue to work until the end of January. Find out more at

<http://www.ucs.ed.ac.uk/usd/stats/spssfaq.html#codes>

We have two new modules under our SPSS site licence. The **Maps** module has been added to the SPSS program and should be available once the licence codes have been updated. Also, the standalone module **Sample power** is available at £20 per annum.

Site Licence software for Christmas

Please note that if you need to have an order processed by EUCS Software Services before the Winter break, it must reach Joyce and Susan before 16th December.

Frances Provan (EUCS)

Anti-virus utility for Macs

EUCS now supports **Sophos Anti-virus** as the recommended anti-virus package for Macintosh computers running OS X. Information on how to obtain and install the software, and to configure automatic updating of virus definition files, is available at

<http://www.ucs.ed.ac.uk/usd/cts/ol/issues/viruses/>

Paul Hutton (EUCS)

WebCT demos

A major upgrade to WebCT software has been released. We plan to install and implement this over the first half of 2006, with the expectation that it will be available for use from September 2006. We have arranged three one-hour demonstration sessions to which all interested staff are invited, to get an initial sight of the upgrade.

At these sessions, WebCT staff will demonstrate the new version of the software, highlight its new tools and features, and answer questions about its functionality.

The details of the migration process have yet to be agreed, but information, support and training will all be available in due course. MALTS staff will be on hand during the open sessions to listen to concerns and to answer questions about the upgrade process.

Sessions

- HSS: Room G.08, William Robertson Building, George Square, at 2pm on Monday 19th December.
- CSE: Swann Lecture Theatre, The King's Buildings, at 10am on Tuesday 20th December.
- MVM: Chancellor's Lecture Theatre B, Edinburgh Royal Infirmary, at 2:30pm on Tuesday 20th December.

Nora Mogey (MALTS)

New project for EDINA

EDINA has been awarded a grant from JISC to investigate the updating of records of electronic journals held on SUNCAT, the Serials Union Catalogue hosted by EDINA. The project – Automating Ingest of Metadata on Serials Subscriptions (AIMSS) – is funded under the Publisher Metadata and Interoperability Projects II programme.

EDINA's project partner is Serials Solutions, with whom the Library has recently signed a contract for the outsourcing of the maintenance of ejournals bibliographic and holding information.

Serials Solutions will send holdings information to EDINA using the Onix for Serials (Serials Online Holdings) standard jointly developed by EDItEUR, the international group for electronic commerce in the book and serials sectors, and the National Information Standards Organization (NISO). The ONIX messages will be processed, data will be matched to the MARC21 format used in SUNCAT, and holdings records will be updated. ONIX for Serials is a new standard: Version 1.0 has just been released. To date it has only been used for pilots, and AIMSS will be its first usage with a union catalogue and the first usage in the United Kingdom.

For further information please contact Fred Guy, AIMSS Project Manager, EDINA (email F.guy@ed.ac.uk).

Fred Guy (EDINA)

Training in Finance and Procurement systems

Do you know how to use Finance and Procurement systems? If not, please come along to one of our training courses to find out more. Hands-on courses and lecture-style presentations are offered for core systems such as **eFinancials** and **Webfirst**, and for newer systems such as:

- **eExpenses**, the electronic expenses management system which lets you raise an expenses claim online;
- **eProcurement**, the module in Cedar which allows you to raise electronic orders to Office Depot and Supplies Team suppliers online (with others being added soon);
- **eInternal Transfers (eITs)**, which replace GL220s;
- **EPS**, the Electronic Printing Service which lets you order printing online direct from Printing Services.

For further information, or to book a place, please see <http://www.finance.ed.ac.uk/finweb/training/>

Training for EPS is in conjunction with eITs, but can be separated for those who already use eITs.

Training is also available for:

- **SciQuest**, the online ordering tool for scientific consumable goods.

For this, please contact Procurement (tel 508006).

Graham Cook (Procurement)

Secure Homeworking

In just five years, 1,354 Government computers went missing, one of them left in a taxi by an MI6 officer after a night drinking in a tapas bar.

We all need to be aware of such risks. When you work from home, or use a laptop, or take information outside University buildings, whether on paper, CD or memory stick, you need to take measures to ensure that it is protected from loss or unauthorised access.

The Records Management Section has produced high-level guidance on working at home. This outlines potential risks and what general measures we can take to address them. The risks range from material not being saved properly to insecure Internet connections and unauthorised access to University information by other people. The guidance applies to all staff taking administrative, research or teaching work home, regularly or occasionally.

Even if your information is not of MI6 calibre, the implications of its loss or damage can be significant. They could include the financial cost of replacing lost work, an impact on your research or that of your colleagues, or damage to the University's reputation. It is very important to take measures to protect your information.

Furthermore, the Data Protection Act 1998 requires us to take appropriate security measures to protect the information we hold about living, identifiable individuals from unauthorised access, amendment or deletion.

For practical suggestions to minimise the risks associated with taking work home, please see <http://www.recordsmanagement.ed.ac.uk/InfoStaff/RMstaff/Homeworking/homeworking.htm>

Kiara King (Records Management)

Workshop on Scientific Data Mining, Integration & Visualization (SDMIV2)

This workshop follows up the first SDMIV workshop, held at NeSC in October 2002 (see <http://www.nesc.ac.uk/action/esi/contribution.cfm?Title=114>), which involved researchers from a wide range of disciplines and identified common problems in many areas of research.

This second workshop will be held at the e-Science Institute, University of Edinburgh, on 14–15 December.

For information please see <http://www.nesc.ac.uk/esi/events/642/>

Gill Maddy (NeSC)

Tracey scaling new heights

Tracey Athay has left EUCS after running its training operation for nearly eight years. This included the rapid move out of Appleton Tower after the South Bridge fire, and creating the attractive and highly appreciated Computing Skills Centre at 19 Buccleuch Place – a testament to Tracey's vision and organisation.

Taking a complete break, Tracey is spending a year in South America, with trips into the mountains. We all wish her the very best for the future.

Meanwhile, back on the ground, EUCS training courses are as always listed and described at <http://www.ucs.ed.ac.uk/usd/cts/courses/>

Chris Adie (EUCS)



“It was 20 years ago today ...”

Alison Bayley retired as Deputy Director of EDINA at the end of October, 20 years after she joined the University's Data Library as a part-time programmer.

Alison's arrival marked the start of the Data Library's expansion to take on projects for library-land alongside numerical data. A native and graduate, in Mathematics, of Edinburgh, Alison has one of the earliest formal qualifications in computing, and worked with Peter Swinerton Dyer to set up the union catalogue of scientific periodicals at Cambridge University, as well as programming at the MRC Unit at the Western General Hospital.

Alison was a technical expert, she created software (e.g. the Gridmap successor to the CAMAP), she helped to manage the growing archive of data files, and she was the obvious choice as deputy director when the EDINA National Datacentre was launched on 25th January 1996.

Always keen that the Data Library engage with the world's best, Alison was Chair of Local Arrangements when Edinburgh hosted the annual conference of IASSIST, the international association for data librarians and archivists, in 1993 and again in 2005, by when she had also become IASSIST Regional Treasurer.

All colleagues wish Alison a long and happy retirement – though she will be back, for example when EDINA celebrates its tenth Anniversary on 25th January. We will have to compete for her affections however, as she is currently national Chair of the Women's Rural Institute.

Alison's career with EDINA and the Data Library will be celebrated in the Staff Common Room, Main Library Building, on 13th December: further details from edina@ed.ac.uk.

Peter Burnhill (EDINA)

HRB lab fully open at last

The open-access computing lab in the Hugh Robson Building (HRB), which houses 217 PCs and nine Mac Minis, is now open on a 24 hour basis.

The entrance is via the old Erskine Medical Library door, next to the main HRB door. It is open from 8:30am to 5pm, Monday to Friday. Access outwith this period is by swipe card (Matriculation or Staff card) and PIN. Lab Supervisors can help anyone who has forgotten their PIN.

Mike Baillie (EUCS)

The end of universities?

A recent *Guardian* article wondered if digital devices and privatised information would do to universities what railways did to stage coaches. Such notions are of great interest to the IT Committee's StarGazing Group, which thoroughly endorses the Library's meeting on Google Book Search (see below). The *Guardian* article is at <http://education.guardian.co.uk/higher/columnist/story/0,9826,1614950,00.html>

Nick Stroud (EUCS)

Christmas and New Year holidays

The University closes for the Winter break at 5pm on Friday 23rd December, and reopens at 9am on Thursday 5th January 2005. Semester Two starts on Monday 9th January 2005.

The EUCS-operated open-access computing lab in the basement of the Hugh Robson Building will be open from 9am to 4pm on 28–30 December and 4th January, but all other labs (including the 24 hour access ones) and all Library sites will be closed for the entire Winter break. Accommodation Services will be opening the Pollock Halls computing lab from 10am to 4pm every day, including Christmas Day and New Year's Day.

All Library, EUCS and telephone services will be closed unless they can run unattended (such as the central EUCS Unix, mail, Web and network services, and electronic resources).

The Library will be closed on Saturdays 17th December and 7th January. Journals and most reference material can be borrowed for the closed period, from 9am on 23rd December until midday on 5th January. (As most of this material is in high demand, fines will apply for late returns.)

Full details of the Christmas and New Year holiday arrangements are at <http://www.aaps.ed.ac.uk/XmasClosure/XmasClosure.htm>

Note that the Main Library is now opening until midnight until Thursday 15th December. Lab PCs on the 1st and 2nd floors should remain available until midnight; those on upper floors will close down as normal.

Helen Hayes (Information Services)

Open Forum on Google and the Library Wednesday 14th December

3:30pm

David Hume Tower, Lecture Theatre C

There will be brief presentations by academics and librarians, followed by an open discussion on what recent Google products such as Google Book Search and Google Scholar mean for the future of libraries.

Tea and mince pies will be available from 3pm. Please sign up by emailing s.gove@ed.ac.uk.

(If you use Google for searching the Internet, you may already have noticed that every search result ends with an invitation to look up your search words in 'Google Book Search' – or you can go straight to <http://books.google.com/>)

EDINBURGH BITS

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Contributions to *BITS* are welcomed.

Copy deadline for January *BITS*:

Friday 9th December