

## Information Services: realignment taking shape

Information Services – IS – is reorganising its internal structure, as announced in the May issue of *BITS*.

This will enable us to improve our strategic planning, provide better services into the future, and provide maximum support for the University's goals and strategies for excellence in research, education and knowledge management.

The realignment proposal has been welcomed by the Principal's Strategy Group, as it will put IS in a better position to develop future services.

The Heads of Colleges are generally pleased with the work we do now, but they need to be sure that we can continue to provide excellent services into the future, with more emphasis placed on an integrated view of education and research. A particular area of interest for them is support for research, and I will review this with them during the Summer.

From this Summer, Information Services will consist of seven Divisions, each with its own Director:

|   |                          |
|---|--------------------------|
| Library User Services:                          | Jeff Haywood             |
| IT User Services:                               | Scott Currie             |
| Library Collections and Information Management: | Sheila Cannell           |
| IT Infrastructure:                              | Brian Gilmore            |
| EDINA:  | Peter Burnhill           |
| Digital Curation Centre:                        | Chris Rusbridge          |
| Business Support:                               | Helen Hayes/Jeff Haywood |

Three part-time Academic Liaison Directors (ALDs) will be appointed, possibly by secondment from Colleges, to join the IS Executive and bring College perspectives to the IS planning process. Liaison with the other Support Groups will also be strengthened. Alexis Easson (Director of Planning in the University's central Policy and Planning unit) is leading a review to help us define the roles of ALDs in liaison across IS and its user communities.

The realignment will mostly take place during this Summer, although our commitment to service continuity means that most users should only be lightly aware of it. Once we have achieved our new internal structure we will revise our documentation, website and communications as necessary.

For further information on this subject please follow the 'realignment' link on <http://www.is.ed.ac.uk/projects/>

*Helen Hayes (Vice Principal, Information Services)*

## Electronic Printing has arrived!

EPS, the Electronic Printing Service, is now live. This allows you to attach files and detailed instructions to an eIT – the University's electronic system for making internal orders. You can also create your own personalised stationery orders and online proofs. (EPS is not for ordering plain paper: please continue to use ordinary eITs for this.)

If you are an existing eIT user you will receive frequent messages about EPS training, which can be booked via MyEd Training Courses. For new eIT users a brief demonstration of EPS will be added to the eIT training courses.

For more information please see [http://www.pps.ed.ac.uk/for/staff/contracts\\_suppliers/printingfiles/EPS.htm](http://www.pps.ed.ac.uk/for/staff/contracts_suppliers/printingfiles/EPS.htm)

*Stuart McLean (Printing and Procurement)*

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**This issue brought to you by *ELECTRICITY*: see 'Electronic Printing' on this page**

## Main Library: redevelopment begins

The MLRP, or Main Library Redevelopment Project, is the phased project to make the Main Library on George Square more open and accessible, making our building a focus for learning and research, and an intellectual hub. The redevelopment will allow for technological advances and enable the building to respond to changes in learning modes, as well as making the collection space adaptable to changing needs.

The first phase of the MLRP will affect the 5th and 6th floors, where Special Collections and Lothian Health Services Archive services and material are located. The 20km of print, manuscript and archival material held on these floors will have to be moved: the stock most likely to be used by readers will be kept in other secure storage areas in the Main Library, and the rest will be moved to a new Library Research Annexe at South Gyle. Special Collections and LHASA staff will be heavily involved in this 'decant', so it is inevitable that services will be affected. It is hoped to begin the decant in late August, and complete it within three months.

If you are likely to need access to Special Collections or LHASA services in the coming months, please get in touch as soon as possible (email [Special.Collections.Library@ed.ac.uk](mailto:Special.Collections.Library@ed.ac.uk)) to help us minimise the impact of these moves on your work. There is fuller information on the MLRP website at <http://www.is.ed.ac.uk/MLRP/>

We are grateful to all our colleagues for their support and understanding during this critical phase of the MLRP.

*Pam Clouston (EUL)*

## Pictures at an Exhibition

The Library has launched its **Museums and Galleries Images Gallery**, showcasing a few of the items in the University's collections. It includes links to its own collections, such as the Walter Scott Archive, Charting the Nation and Object Lessons, and to other collections such as SCRAN, AMICA and ARTstor. This section of *Library Online* will be steadily developed, as resources permit. The Gallery is at <http://www.lib.ed.ac.uk/images/>

Another new gallery in *Library Online* celebrates the 160th anniversary of the founding of New College and the 70th anniversary of the current New College Library building. This includes items representing the diversity of the collections, and also highlights some of the individuals who have gifted items to the Library over the years. This gallery is at <http://www.lib.ed.ac.uk/resbysub/newcollspeccoll/>

*Steve Scott (EUL)*



## Shibboleth and the EDINA SDSS project

For many years people have used Athens usernames and passwords to access national online resources such as databases and e-journals. JISC is planning a major switch in access management, to a technology called *Shibboleth* – a product of the Internet2 initiative (<http://shibboleth.internet2.edu/>). Shibboleth will be used across a wide range of applications, not just those traditionally addressed by Athens. For further background please see [http://www.jisc.ac.uk/index.cfm?name=pub\\_shibboleth](http://www.jisc.ac.uk/index.cfm?name=pub_shibboleth)

The Shibboleth Development and Support Services (SDSS) project, based in EDINA, was set up to support JISC Core Middleware Programme projects. It is described at <http://sdss.ac.uk/>

### Shibboleth Federation

An important component of the Shibboleth approach is the *federation*, made up of Service Providers and institutions who want to use services; such institutions are known as Identity Providers, since their task in the context of Shibboleth is to manage the identities of the people associated with them. While a Shibboleth federation is a technical construct, the main challenges are legal and ethical: it takes time for the full implications and obligations of a federal structure to develop, and for the participants to appreciate the change of mindset required.

Part of the task of the SDSS project was to set up a development federation to give JISC-funded Shibboleth projects a structure in which to locate their work, and to give everyone involved some experience of the federal way of working. SDSS has operated its federation on strict guidelines so that it could be used as a model for production operation in due course.

The SDSS federation has been seen as a success within the community and has been adopted as the forerunner to the *UK Access Management Federation for Education and Research*, due to come into existence later this year. JISC has asked UKERNA, the group responsible for JANET, to manage the UK Federation. SDSS will provide technical support to UKERNA in this work.

### JISC Showcase Event

All interested parties are invited to attend a JISC Access Management Showcase on 18th July in London. The event will present national and international development work and outline the requirements and benefits of adopting federated access management. For a programme and to register (as soon as possible please!), see [http://www.jisc.ac.uk/index.cfm?name=event\\_showcase\\_0706](http://www.jisc.ac.uk/index.cfm?name=event_showcase_0706)

*John Murison (EDINA)*

*Nick Stroud (EUCS)*

## The Website Development Project

### User testing

The Project has entered a phase of user testing which will continue through the Summer. The process will confirm the needs of our external audiences and help us determine an information architecture for the new site. We are working with a cross-section of our stakeholders, identified and recruited with the help of our advisory board.

### Accompanied surfing

One of several user testing methodologies we are employing is 'accompanied surfing'. To help us in the collection and analysis of user data, we've recently installed Morae user testing software on a dedicated PC at our office.

Morae records video, audio and screenshots of participants surfing the web. We can also observe the accompanied surfing sessions remotely and add comments in real time.

The software will allow us to study user behaviour in great detail and generate accurate user performance statistics. We'll be able to share first-hand experience of accompanied surfing, producing video clips for use in our presentations.

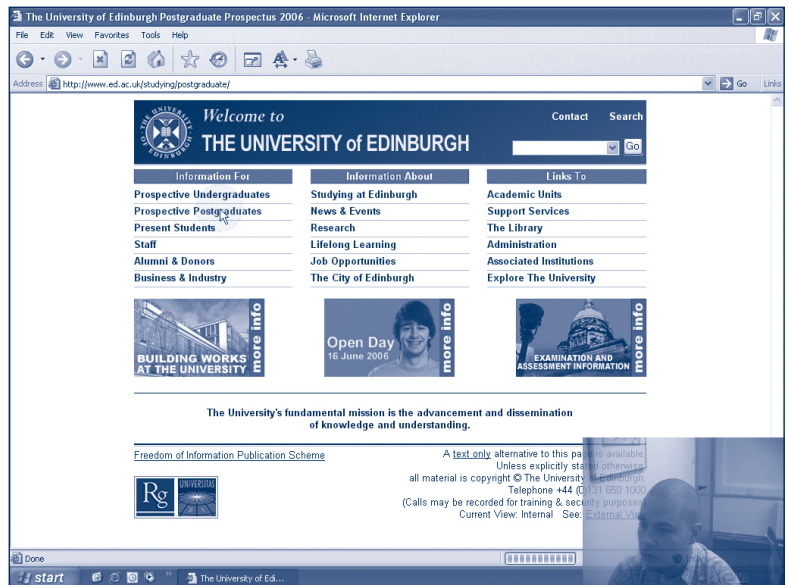
Next month we'll produce an update on the user testing that's taken place so far.

### Project website

For more information about the Website Development Project, see <http://www.ed.ac.uk/websiteproject/>

### Contact

If you'd like to discuss any issues regarding the development of the University website, or contribute your views, please contact Dawn Ellis (tel 506379, email [dawn.ellis@ed.ac.uk](mailto:dawn.ellis@ed.ac.uk)).



*Morae screenshot: the participant's facial expressions and comments are captured, along with mouse movements, clicks and keystrokes as they surf.*

## The Internet: crucial for student recruitment

Research from America suggests that websites are now second only to campus Open Days in their contribution to student recruitment. Blogs tell school students what higher education is really like, and email can be used to let students find others with similar interests. Unedited online resources seem to be increasingly valued by potential students, despite grammatical and spelling errors, since this is perceived as being a more honest source of information than official, formal 'sales pitches'.

There is more about this at <http://abcnews.go.com/Technology/wireStory?id=1990599>

**Technology/wireStory?id=1990599**  
Nick Stroud (EUCS)

## Recommended computers and web browsers

### Desktop computers

The IT Committee has accepted the EUCS proposals for 'minimum' and 'recommended' configurations of Windows, Mac and Linux computers. Narrowing down the range of supported hardware greatly helps maintenance of software environments and reduces the cost of support. This year's list is at <http://www.ucs.ed.ac.uk/ucsinfo/cttees/itc/2006-05-09/paperK.html>

### Preferred browsers for 2006–2007

The University has a policy of recommending 'preferred web browsers' with which all of its online applications should work. The list of preferred browsers is revised and approved annually.

This year the recommendation is simply to upgrade Firefox to version 1.5, otherwise leaving the preferred browsers as they have been in the current session: Internet Explorer 6 and Firefox for Windows XP, Firefox for Mac OS X, and Firefox for Linux, as detailed at

<http://www.ucs.ed.ac.uk/ucsinfo/cttees/itc/2006-05-09/paperI.html>

The IT Committee has agreed that Windows XP, Mac OS X and Linux are the only supported desktop systems in the University, so browsers for Windows 2000, Mac OS 9 and Solaris have been removed from the table.

Chris Adie, Graham Newton (EUCS)

Mark Ritchie (MIS)

## VoIP and the University

The world is moving steadily towards Internet telephony – Voice over IP, VoIP. Every UK university is preparing to migrate to VoIP; Dundee is in the process, and Heriot-Watt is at the tendering stage.

At today's prices it would cost about the same to install 800 VoIP telephones or 800 analogue ones, but the VoIP system would be capable of expansion to 4,000 handsets at marginal cost while the analogue system would have to be written off entirely within a few years.

Recurrent costs do not disappear since the Internet and its access equipment is not free, but there should be savings.

The University's telephone supplier, Philips, has agreed to maintain our existing system for another 15 years, which gives the University time to arrange an orderly transfer to VoIP.

The Telephones Project plans to phase in VoIP to minimise disruption. As soon as all the technical problems have been solved, a VoIP system will be recommended for any new building or refurbishment project.

The aim will be to allow staff to keep their existing telephone numbers, though new ways of addressing telephones will come into use alongside conventional numbers. UKERNA plans to trial an 'enumber server', and is working with TERENA and Internet2 to provide an international service – although there are alternative competing services in this area. People will effectively be able to use their office telephone from anywhere in the world, just as they can presently use their Edinburgh email address.

There are still many technical issues to resolve, such as the interface between digital and analogue telephones, emergency access, power, the need for uninterruptible power supplies, and whether telephones and computers should use the same port. These issues are being tackled by an EUCS working group – 'VOIPGO' – to plan a smooth transition to a future-proof telephone system for the University.

*Murray Clayton (EUCS)*

## Kenway Review progressing

The computing review panel met at the end of June, with Karen Stanton (University of Nottingham), Paul Jeffreys (University of Oxford) and Nick Shelness (Independent Consultant) as external members.

*Richard Kenway*

## Software news

### STATISTICA

We have been asked by Statsoft if the University would be interested in a site licence (annual cost) or bulk purchase (one-off payment) of Statistica. Please contact Software Services if you would like to know about the deals available. There is information about Statistica on the Statsoft website, at <http://www.statsoft.com/>

Note that Computing Services already supports a number of statistical packages, so Statistica would be unsupported.

### Endnote X

Endnote X for Windows is now available. Contact your local Computing Officer if your School or Unit is licensed. More information, including a list of licensed Schools and Units, is at <http://webdb.ucs.ed.ac.uk/software/refman.cfm>

Endnote X for Macintosh is due in Autumn 2006.

### Erratum

The new price for a single copy of Mathematica is £140 +VAT p.a., not £140 including VAT as stated in May's *BITS*.

*Frances Provan (EUCS)*

## Windows Vista

Windows enthusiasts will have noticed that Microsoft has released a preliminary version of its new operating system, Windows Vista.

As with any new operating system, this will be thoroughly investigated by EUCS Desktop Services when the full commercial product is released. Meanwhile the only version available through the supported Windows desktop will continue to be Windows XP.

*Graham Newton (EUCS)*

## Staffmail upgrade

In deference to the Principal's request that all exam marking be completed by 7th July, EUCS is delaying implementation of the Staffmail upgrade until the following weekend, 15th and 16th July. This should remove any possibility of email problems disrupting the marking process, and gives more time for people who have yet to update their mail settings – a step-by-step guide for this is available at <http://www.ucs.ed.ac.uk/email/clients/>

*Graeme Wood (EUCS)*

## Scottish Developers Mini-Conference

Scottish Developers is holding a half-day conference on 3rd August, at which Microsoft MVP ("Most Valuable Professionals") speakers will be talking about '.NET debugging, tracing and instrumentation', and 'Code Coverage in .NET'. Details are provided at <http://www.scottishdevelopers.com/modules/news/article.php?storyid=152>

*John A. Thomson (Scottish Developers)*

## EUCLID Project update

The EUCLID Project procurement of a new student management and information system is now well under way and on schedule. A short-list of suppliers has been compiled:

- Ciber UK
- Sungard HE
- Tribal Technology

These will be visiting the University for demonstrations and meetings, and the performance of the software will be evaluated by staff and students. Sessions are being held between 17th July and 4th August. A wide range of staff are taking part, and we are grateful to the many colleagues who are contributing their time and expertise.

The University is considering a number of factors in evaluating the short-listed suppliers. The performance of the software itself is one factor, but a robust evaluation process is being used to ensure that the University has all the right information to select a supplier.

Exciting new roles on the EUCLID Project are currently being advertised. **Functional Specialists** and **Functional Experts** will play pivotal roles in change management and implementation. We are looking for people with excellent analytical, interpersonal, and problem-solving abilities to manage and deliver change successfully, negotiate with colleagues, and find solutions. The posts are currently being advertised internally as secondment opportunities for 2–3 years; you can read the full job description online at <http://www.jobs.ed.ac.uk/>

Part-time secondments will also be considered.

Visit the EUCLID Project website for the latest edition of 'The EUCLID Angle' newsletter, at <http://www.projects.ed.ac.uk/euclid/>

*Sarah Albeson (EUCLID)*

## Availability of student management information

A number of new initiatives have been implemented to improve the availability of student-related management information across the University. These include:

- **Student Management Information DataMart (STUDMI)**. This has an extensive range of fields covering both personal and programme information for every student studying at the University since 1995–1996. The fields are grouped into menus corresponding to the various stages of the student University lifecycle as well as by additional themes such as fees, personal details and individual programme information. The data can be used to produce statistical analyses in support of University decision-making, and to support processes such as Teaching Programme Reviews *etc.*
- **Student Progression**. This enables a cohort of students within a programme group to be tracked on an annual basis, recording aggregate progression based on each student's position at the end of each session.
- **UCAS/GTR Admissions Data Mart**. This contains all UCAS year-end entrant data from October 2001 entry, and monthly data from September 2004. It enables trend reporting across an extensive range of data to inform the University's admissions policies.

The three data sets detailed above are all accessible via the online version of Business Objects – WEBI – which itself is accessible as a channel in the MyEd portal.

- **Course Assessment Pass Rate (CAPaR)**. This report is accessible via WISARD, which is now only available as a channel in the MyEd portal. The report generates course pass/fail rates for all undergraduate non-honours courses since 1999–2000. For further details please see <http://www.registry.ed.ac.uk/wisard/UserGuide/CAPaR.htm>

Further information is available at <http://www.registry.ed.ac.uk/Systems/MI/>  
*Alex Hyde-Parker (Registry)*

## Workshops on technology for learning

JISC infoNet and the Higher Education Academy are presenting four workshops on designing technology-enabled learning spaces:

- inquiry-based group learning (17th July, University of Warwick)
- blended learning and teaching (21st July, University of Hertfordshire)
- social and collaborative learning (25th July, Glasgow Caledonian University)
- strategic planning for the development of learning environments following the 2006 UK Higher Education Space Management report on the impact on space of future

changes in higher education (21st September, University of East London)

The workshops will be of interest to senior managers in higher education with responsibility for space planning and management, and build on the recently launched JISC guide 'Designing Spaces for Effective Learning', which is available at <http://www.jiscinfonet.ac.uk/infokits/learning-space-design>

There is no charge for these events but delegate numbers are limited; please book early to ensure a place. For further information and bookings, please visit [http://www.jisc.ac.uk/eli\\_learningspaces.html](http://www.jisc.ac.uk/eli_learningspaces.html)

*Katherine Eade (JISC infoNet)*

## Novel Computing in Science: exploiting High Performance

Novel computing opens up new methods of scientific research that would be impossible with more traditional techniques. Using High Performance Computing (HPC) we are able to simulate the very small, such as quarks and sub-atomic particles, and the very big, such as the Earth or the whole Universe.

Many researchers around the University now use computing in their research. This can be anything from analysing a database of results, through using an existing numerical model, to writing code to generate, analyse or process data. Any of these activities could potentially use HPC, utilising large and novel computing resources to solve previously intractable problems in a reasonable time scale.

### Edinburgh's Advanced Computing Facility

Through the purpose-built Advanced Computing Facility, an exceptional range of resources is available to Edinburgh academics. For example, Edinburgh has the only Blue Gene system in the UK, a novel technology providing unprecedented computing performance coupled with low power consumption, floor space and cost.

### EPCC delivers!

Exploiting these systems can be complex; however EPCC – Edinburgh Parallel Computing Centre – has been at the forefront of HPC research for over 15 years, and has successfully carried out national and international research projects in many areas of science and industry throughout this time.

EPCC is currently expanding its research collaborations around the University, with an aim of setting up long-term connections. There are many ways in which EPCC can help researchers fully exploit novel computing, from co-supervision of MSc or PhD students to joint research grant applications.

A new project has started in the University, called **edikt2**. As a member of edikt2, EPCC can offer free effort to help start collaboration projects. If you think you could benefit from using HPC in your research, please contact Jon Hill ([j.hill@epcc.ed.ac.uk](mailto:j.hill@epcc.ed.ac.uk)) or Lorna Smith ([l.smith@epcc.ed.ac.uk](mailto:l.smith@epcc.ed.ac.uk)) to discuss your ideas.

The edikt2 website is <http://www.edikt.org/>

*Jon Hill (EPCC)*

## JISC RSC news

### Integration in service provision: a new guide by OSS Watch

Integration between systems is often cited as the key to providing the best possible IT service. But why is that? What does integration really mean, and how can we achieve it? A new guide from OSS Watch addresses these questions, focusing on integration and service delivery. The document examines what integration means and why it is important, before introducing the fundamental components of integrating disparate IT services. Each component is then discussed in detail and a relevant case study from an academic context examined in each case. There is full information at <http://www.oss-watch.ac.uk/resources/integration.xml>

### Major journals archive free to UK universities

A new JISC agreement with Oxford University Press makes 135 years of scholarly resources available free to UK universities, in perpetuity. The archive totals over three million pages from 300,000 journal articles. Articles in the humanities, sciences, medicine, law and the social sciences include many of the leading titles in their fields over the last two centuries. The archive, if purchased individually, would cost in the region of £80,000 per institution.

For further details of the JISC/OUP agreement, please go to <http://www.jisc.ac.uk/collections/>

To access the Oxford Journals Digital Archive, go to <http://www.oxfordjournals.org/collections/archives/>

### “WWW2006” Edinburgh – conference reports online

The World Wide Web Conference is the global event for key influencers, decision makers, technologists, businesses and standards bodies shaping the future of the Web. Podcasts, Slides, Posters and Wikis and an invitation to Banff for 2007 are all now available from the conference website at <http://www2006.org/>

### Warning about search engines

Looking for free music downloads on the Internet could be asking for trouble: some searches lead users to websites that expose them to spam, spyware and other dangers. A new report reveals that searches for even quite innocuous subjects are risky. The most dangerous search words are apparently “free screensavers”. There are details at <http://news.bbc.co.uk/1/hi/technology/4765199.stm>

### Radio Frequency Identification report

Radio Frequency Identification (RFID) technologies allow the transmission of a unique serial number wirelessly, using radio waves. Attaching an RFID tag to a physical object allows the object to be monitored by existing computer networks and back-office administration systems. RFID is used to tag pets, track the distribution of products, and in some biometric passports. Their use is increasing, and some applications are controversial. A new report by the JISC-funded TechWatch service examines RFID technology, including some of the current uses within research, administration, teaching and learning. The report is available at [http://www.jisc.ac.uk/index.cfm?name=techwatch\\_ic\\_reports2005\\_published](http://www.jisc.ac.uk/index.cfm?name=techwatch_ic_reports2005_published)

*Caroline Porteous (JISC Regional Support Centres)*

## Twenty years of computer viruses

The first recognised computer virus – “Brain” – was released in 1986, the same year in which the term was defined in a dissertation, and the Hamburg Computer Club met for the first time to explore the consequences of this new type of computer program.

The ideas had been around for some time before this, though: in America the cold war encouraged a lot of official experimentation with self-replicating programs and worms. Such was the innocence of those early days that Brain’s writers included their names and addresses in the code – which then went around the world, riding on 5" floppy disks. Dozens more viruses followed very quickly, adding encryption, stealth, and a variety of ‘payloads’ from harmless to highly destructive. In 1988 a group of virus writers who came to be known as the Bulgarian Virus Factory started producing a new breed of sophisticated viruses such as ‘Dark Avenger’. Coincidentally a leading virus researcher emerged in Bulgaria around the same time, but is not thought to have been a member of the ‘Factory’. The UK’s Computer Emergency Response Team – CERT – was set up this same year, indicating that viruses were becoming a serious problem.

In 1990 viruses became ‘polymorphic’, automatically changing their appearance to thwart anti-virus software, and in the same year the simpler ‘Good Time’ virus set off the chain email problem which has been with us ever since. The possibilities for extortion began to be exploited in the early 90s, with for example a virus encrypting all the files on an infected computer and money having to be paid to get the key to decrypt them.

The appearance of Windows 95 was supposed to signal the end for viruses; anti-virus companies therefore relaxed their guard, allowing the ‘Concept’ virus to spread very rapidly through the medium of Word macros. Relatively little programming skill was needed for this so more people joined in, a process continued and expanded with the release of Visual Basic in 2000. At the same time the rapid expansion of the Internet and the World Wide Web was making it easier both for viruses to spread and for virus-writers to share information.

In 1998 the first attempts were made to gain control of other people’s computers, and in 1999 the ‘Melissa’ virus had a huge impact around the world – in spite of requiring human intervention in order to spread. This was followed by several other notorious viruses as the hackers exploited weaknesses in operating systems, able to rely on computer users being too casual to install the patches that would protect their systems. The ‘Linda’ worm of 2001 was particularly successful, as it brought together in one package many key virus techniques previously only seen in separate programs.

In 1990 there were 82 known viruses in the world. Today, anti-virus software checks for 195,236 different instances of malware, although the number of viruses in active circulation around the Internet is probably much smaller than this. To keep up with this rapid increase, anti-virus software which was once updated monthly or even quarterly now has to be checked hourly.

Malware is constantly evolving as old weaknesses are fixed and new ones are discovered. Conventional

viruses are tailing off, with instant messaging and mobile phones now being targeted. A ‘Botnet’ is an army of computers that have been taken over and can be put to malevolent use, such as mounting a distributed denial of service attack – in which the target is bombarded with data and slows to a crawl – or crashes. There are probably millions of computers in the world which can be taken over in this way, most of them controlled by cyber-criminals who can extort large sums of money by threatening to bring down a business’s computer systems.

The future is likely to see increasing sophistication of, and criminal involvement in, computer malware, with the ‘worms’ that go wriggling around the Internet likely to become as sophisticated as viruses have been. Many of these will be used for blackmail, and to gather personal information which can be used for example to break into people’s bank accounts. The good news is that all major software vendors are building better security into their products. The University has sophisticated protection on top of this, with networks, firewalls, automatic software updates, the Incident Response Team, automated network scans for vulnerable computers, and the new Malware Working Group – which has started to consider the issues of protecting home computers.

We must never allow ourselves to become complacent, though, and while central teams work to protect hardware and software, we must each as individuals take great care never to divulge any information which could be used to break into any of the computer systems we use.

*(Notes taken at a talk by  
Garry Scobie, EUCS)*

## EUCS retirements

Christine Armstrong



Christine came to the University in 1971 as a Fortran programmer in the Department of Educational Sociology, then worked her way through the Program Library Unit and the Centre for Application Software and Technology into Computing Services.

For several years Christine worked on revenue-earning activities, shipping systems to customers as diverse as the BBC, the Metropolitan Police and the University of Baghdad. She moved into database support, where her programming experience was invaluable in many complex database applications. She taught Microsoft Access courses over many years.

Within the Information Tools team, Christine will be remembered for her constant good humour, her tenacity in solving intractable database problems, and the quantities of garden produce she generously gave us.

She and her husband Brian are keen cyclists, golfers and hill-walkers, and we wish them a long and active retirement on the hills and fairways.

*Ed Dee (EUCS)*

Bob McGonigle



Bob started his working life with BGS in 1969, quietly observing explosions in Yugoslavia, Greece and Iran (seismic tests) before joining the EUCS Graphics Group in 1989. His main work then was to install and maintain Uniras on a variety of platforms. He represented Edinburgh on the Uniras UK User Group Executive, and stood in as graphics team leader when necessary.

In 1993 Bob transferred into the EUCS Commercial Division to run EMWAC, the European Microsoft Windows NT Academic Centre. He did so well in making this an international success that Microsoft CEO Bill Gates knew of it, and wanted to make more of it. This work generated a considerable amount of money for the University, from software (EUCS produced Web and email servers for Microsoft) and from training, which was so successful that it was eventually spun out as a semi-autonomous company with offices in George Street.

*Brian Gilmore (EUCS)*

## Digital curation survey

The Digital Curation Centre is using a survey, focus group and interviews to enhance its support for the digital curation, preservation, and eScience communities.

If you can spare 15–20 minutes to complete the online survey, please go to [http://www.dcc.ac.uk/adding/public\\_survey/](http://www.dcc.ac.uk/adding/public_survey/)

*Joy Davidson (DCC)*

## Didn't Thailand do well in the World Cup?

Along with the usual teams – Germany, Australia, South Korea, Japan, the Netherlands – Thailand took home some of the honours in the football World Cup in June. The Robot version, that is – whose backers confidently expect robot teams to be beating human teams by 2050. This alarming possibility unfolds at <http://news.bbc.co.uk/1/hi/technology/5078952.stm>

*(Editor)*

### EDINBURGH BITS

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Nick Stroud, Computing Services.

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Email: [C.Zaccardelli@ed.ac.uk](mailto:C.Zaccardelli@ed.ac.uk)  
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#### Some acronyms explained:

<http://www.ucs.ed.ac.uk/ucsinfo/acronyms.html>

NB: if you fail to access a URL shown in *BITS*, please email [BITS@ed.ac.uk](mailto:BITS@ed.ac.uk).

Contributions to *BITS* are welcomed.

Copy deadline for August *BITS*:

**Wednesday 19th July**