

# JISC news

Joint Information  
Systems Committee

## MAKING TECHNOLOGY ACCESSIBLE

The new disability legislation explained

### *Also in this issue:*

New JISC Structure

Hidden Costs of Networked Learning

The Distributed National Electronic  
Resource (DNER)

Launch of Resource Discovery Network (RDN)

ISI Web of Science® UK Launch

Virtual Environments for Learning

Information Access and  
Security Workshop Report

Events

New Publications

A new JISC publication  
about the DNER is  
available from JISC Assist  
(see also centre pages)



HIGHER EDUCATION  
FUNDING COUNCIL FOR ENGLAND  
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WELSH FUNDING COUNCILS  
CYNGHORAU CYLLIDDO CYMRU

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FURTHER  
EDUCATION  
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## Message from the Editor

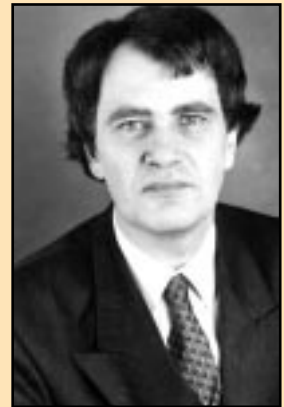
**W**elcome to the re-launched *JISC News*. This issue reports on how the growth of communications and information technology (C&IT or ICT) is impacting on the education community. The costs and benefits of using IT are weighed up in terms of the human as well as the organisational and financial aspects. You may be particularly interested in the articles on recent accessibility legislation (pp. 3-4), the new Distributed National Electronic Resource (DNER, pp. 6-7), the hidden costs of networked learning (p. 5) or virtual learning environments (pp. 9-10). The JISC, in its awareness raising capacity, will keep the education community abreast of the latest technological developments and their impact on users of JISC services and on information systems in general. *JISC News* will be published three times a year, in Spring, Summer and Winter. Regular features will include Spotlight on Services, Project News, Events and Publications. As the Editor of *JISC News* I am interested in your thoughts and ideas. Please write to me at [assist@jisc.ac.uk](mailto:assist@jisc.ac.uk) with your contributions and any important issues you wish to raise.



**Jane Charlton**  
Editor, JISC News

## JISC Welcomes FE

The further education (FE) sector in England, Wales and Northern Ireland will be joining the JISC formally next year. FE in Scotland is considering whether to join. Early actions will be the connection of all FE colleges to JANET, the creation of Regional Support Centres to support FE use of the network and applications, the identification and purchase of additional electronic resources of relevance to FE and the investigation of Managed Learning Environments. Other areas of common interest between FE and HE will also be explored. Full integration of FE into the JISC is expected to take up to three years.



**Malcolm Read**  
JISC Secretary

## JISC Restructuring

The JISC has recently restructured to reflect changing priorities. In particular:

- The area of 'middleware' is becoming very important. This is the application of security, authentication and authorisation technologies to network communications. Such

technologies are essential for access to chargeable electronic resources, electronic commercial transactions (e-commerce) and the transmission of sensitive information (eg for certain administration applications)

- The need to complement the



The new JISC structure

# Making new technologies accessible for disabled students

work of the new Generic Learning and Teaching Centre and Subject Centres by providing a resource to prove, or otherwise, through a managed programme, the suitability of emerging technologies to support the learning and teaching process

- The value of integrating IT based applications within institutions more effectively through 'joined-up technologies'. For example, the development of student support systems, using commercial packages, will include and allow interaction between timetabling, library systems, teaching material and assessment

The provision and further development of a robust and resilient network (JANET), building a Distributed National Electronic Resource (DNER) and the human and organisational issues arising from the pervasive nature of the Internet and IT remain key activities of the JISC strategy.

For further information on a New Approach for the JISC see: [http://www.jisc.ac.uk/pub99/new\\_approach.html](http://www.jisc.ac.uk/pub99/new_approach.html)

And for the work of the JISC's sub-committees, see: <http://www.jisc.ac.uk/general/index.html>

## Malcolm Read

JISC Secretary

and Jane Williams

Head of JISC Assist

**The JISC held a one-day conference, 'Supporting the use of information systems and information technology in higher and further education', on 20 January. The JISC's key activities were discussed and a report will appear in the Spring issue of JISC News.**

***There is now a legal obligation for the education sector to ensure that information provided to the general public is accessible to disabled people. Caroline Davies of the University of North London describes the implications***

**A**ccess to Information and Communications Technology (ICT) is one of the primary civil rights issues facing people with disabilities now and in the future. ICT is becoming a major feature of modern society, providing access to information, services, communication, entertainment and education. If disabled people are unable to use new technologies because their access needs have not been considered, this will cut them off from society as effectively as did Victorian institutions.

### What are the barriers to access for disabled people?

Disabled people can experience difficulties using new technologies for reasons which range from technically complex to quite mundane. It may simply be that the computer is located in an inaccessible room at the top of a flight of stairs in a cramped, badly lit corner. Or it could be that the computer is not equipped with specialist enabling software, or that the keyboard and mouse may be awkward or uncomfortable for some disabled people to use. It may also be that the design of the ICT that the disabled person wishes to use is incompatible with enabling technologies.

People who are blind or visually impaired will find a standard computer difficult or impossible to use without specialist enabling software which allows them to enlarge what is on the screen – text, icons, menus and cursor – or to have it read to them through screen reading and speech synthesis software. If web sites have graphics which have no 'alt

tags' to provide an alternative text description then their content will be lost for blind users. Web pages with scrolling or flashing text or those which are constructed in a frames environment or with Java are particularly confusing and unfriendly for screen reading software. Cluttered screens and complex navigation will be a nightmare for many dyslexic users. In a multimedia environment people who are deaf will need alternative text captions for audio material. People with limited manual dexterity and some blind people may need alternative inputting devices or speech recognition software in order to access standard software and ICT.

*'New learning technologies and access to web-based information must be designed with inclusion in mind'*

### What does the legislation say?

Under Part 3 of the Disability Discrimination Act (DDA), which came into force on the 1st October 1999, providers of goods, facilities and services must make them accessible to disabled people. This includes information and services provided through web sites. Although education is generally exempt from having to comply with Part 3 of the DDA, there are aspects of education provision which are covered. A major area

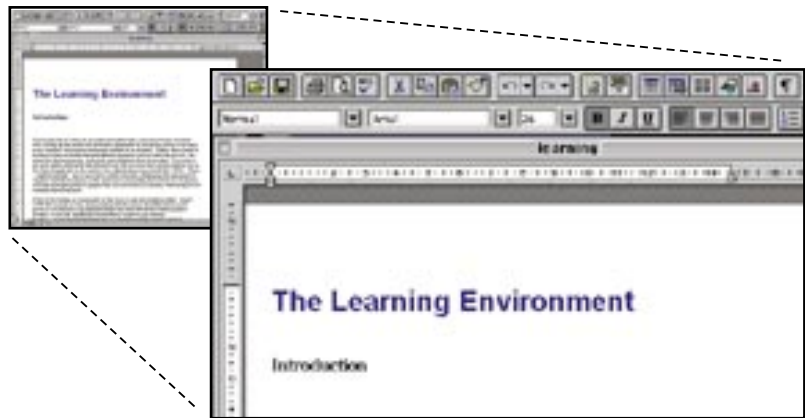
where universities will have to comply with the DDA is in access to information provided to the general public. This will include all information that is provided to applicants, such as prospectuses, and will also include the university's web site.

The government's Disability Rights Task Force (<http://www.disability.gov.uk/drtf/>) is committed to bringing education within the remit of the DDA and it is likely that, in the future, many more aspects of universities' provision will have to comply with anti-discrimination legislation. Disabled students may have new rights which will require universities to provide an accessible curriculum including that which is delivered by new learning technologies. Skill, the National Bureau for Students with Disabilities, has information on its website (<http://www.skill.org.uk/>) about current and possible future legislation. The JISC-funded DISinHE site (<http://www.disinhe.ac.uk/resources/bulletins/>) contains useful information about legal issues for web-based resources.

Another potentially powerful force for change is the Quality Assurance Agency's (QAA) new Code of Practice for disabled students. This will come into force in late 2001 and its precepts and guidance will contribute to the framework for institutional and subject audit. The draft Code (<http://www.qaa.ac.uk/COPswd/consultcode.htm>) makes explicit reference to the need for computing facilities and new technologies to be accessible to students with disabilities.

### **Making new technologies accessible?**

Many new technology course developers are becoming interested in accessibility and are concerned to make their materials inclusive. The JISC-sponsored session on disabled access issues at the recent Association of Learning Technologies Conference (ALT-C 99) generated considerable interest. The HEFCE's Teaching and



Specialist enabling software allows visually impaired users to enlarge parts of the screen

Learning Technology Programme (TLTP) projects have recently been able to bid for additional funding to improve the accessibility of their products. For those interested in making learning technologies accessible to disabled students there is a very useful on-line publication from the HEFCE, *Guidelines for Accessible Courseware* ([http://www.disinhe.ac.uk/resources/guides/accessible\\_courseware/](http://www.disinhe.ac.uk/resources/guides/accessible_courseware/)), which gives an accessibility checklist for developers.

There is considerable practical help and guidance available for those developing web sites or producing web resources. Visit the Web Accessibility Initiative on the W3C site (<http://www.w3.org/WAI/>) for detailed guidance and the DISinHE site (<http://www.disinhe.ac.uk>) which puts these issues in an HE context. You can de-bug your site (in terms of access problems) by using Bobby, a web-based tool that analyses web pages for their accessibility to people with disabilities (<http://www.cast.org/bobby/>).

The Royal National Institute for the Blind (RNIB) has an excellent video 'Web sites that work' which looks at how accessibility issues can be incorporated into the design of web sites. It can be obtained free of charge by emailing Julie Howell at the RNIB ([jhowell@rnib.org.uk](mailto:jhowell@rnib.org.uk)).

New learning technologies and access to web-based information have considerable potential advantages for disabled students. But they must be designed with inclusion in mind if they are not to produce highly sophisticated and impenetrable barriers to learning.

### **Caroline Davies**

Disabilities Manager  
University of North London

### **Editor's note**

*The JISC is ensuring that its own web sites are accessible by all. An accessibility audit of the JISC web site has been carried out by the Department of Applied Computing, University of Dundee. Audits of several service web sites have been commissioned for use as case studies.*

### **Useful information**

- **DISinHE** (Disability and Information Systems in Higher Education) is a JISC-funded service to provide information and strategic advice on how information systems can be used to support staff and students with disabilities. For further information, see: <http://www.disinhe.ac.uk/>

## Hidden Costs of Networked Learning

**A** recently published research report by Sheffield Hallam University on *The Costs of Networked Learning* reveals that students and academic staff often do not know the financial implications of working by computer at home. The main aims of the study were to identify the unrecorded or hidden costs involved in networked learning for the benefit of policy makers, course providers and students.

'The issue of hidden costs has not yet been applied to an educational context, despite being used quite extensively in non-educational settings. It encompasses costs which are fundamentally unrecorded (such as overtime of academic staff) and those which are generally absorbed into larger budgets (and therefore cannot be attributed to a particular activity),' says Professor Paul Bacsich, Professor of Telematics, head of the University's Virtual Campus Programme and leader of the research team.

The report, which proposes a move towards 'activity-based costing' in HE, states that educators should be prepared to move towards recording their time against activities – though not necessarily in the form of daily time-sheets. 'Until now, no one has really looked at the long-term financial implications of networked learning,' said Professor Bacsich.

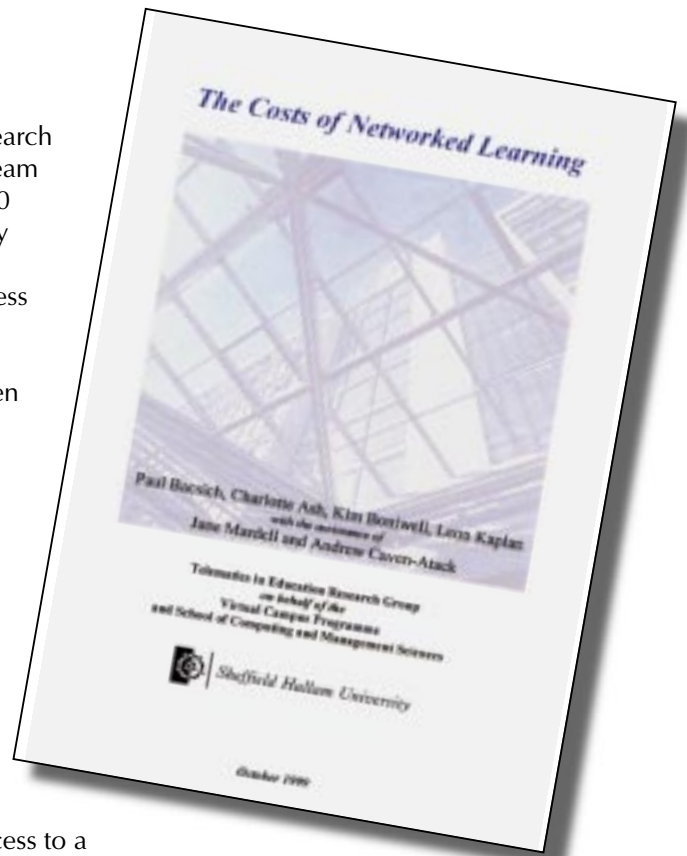
Examples of hidden costs identified by the study team include the time, inconvenience and extra costs incurred by staff away from home on business and the cost to students of purchasing ink jet printer cartridges for use on a home PC to print lecture notes from the course web site or copies

of assignments. Research undertaken by the team showed that up to 90 per cent of university academic staff were thought to have access to a home computer which they use for work purposes. When interviewed, staff in seven typical institutions thought that about 50 per cent of students had access to a home computer. A survey of students at Sheffield Hallam undertaken as part of the study showed that 70 per cent of those who replied had access to a computer and that half of these computers were connected to the Internet. 'We also found that students were spending, on average, £81 per academic year solely on computer consumables. Having been a student myself recently I can say, from personal experience, that this is a conservative figure,' says Charlotte Ash, the study's project manager.

The report confirms that university managers know too little about student and staff behaviour, attitudes and lifestyles. Universities are concerned about the 'cost of costing' and are also troubled by who will pick up the bill once the hidden costs have been made apparent. The complete report is available at:

[http://www.shu.ac.uk/virtual\\_campus/cnl/](http://www.shu.ac.uk/virtual_campus/cnl/)

For further information or copies of the report, contact Professor Bacsich on 0114 225 2977, or research project manager Charlotte Ash on 0114 225 4969.



*'Until now, no one has really looked at the long-term financial implications of networked learning'*

The study was funded by JCALT (JISC Committee for Awareness, Liaison and Training) with additional resources being provided by the Sheffield Hallam University Virtual Campus Programme and the School of Computing and Management Sciences. The study was part of the JCALT work programme. See: <http://www.jisc.ac.uk/jcalt/index.html>

# The Distributed National Electronic Resource (DNER)

**T**he DNER aims to bring together much of the JISC's work in a managed environment for accessing quality assured information resources on the Internet. These resources include scholarly journals, monographs, textbooks, abstracts, manuscripts, maps, music scores, still images, geospatial images and other kinds of vector and numeric data, as well as moving picture and sound collections. The ultimate goal, which will be implemented in stages, is to provide customisable interfaces for individual users, so that they will always have easy and quick access to the resources they need most frequently.

*'The DNER is set to become the major innovation in UK education'*

The DNER has the potential to provide real improvements in the presentation of JISC resources and associated services. Many users of information technology and systems within the education sector will already be using parts of the DNER without knowing it. What the new strategy does is to bring together existing resources and support services into a coherent model to support education. More than that, it also provides funding and strategic management for the continuing development of collections of content and forms of access to them.

The key principle guiding the development of the DNER is the integration of JISC resources and services, especially in terms of:

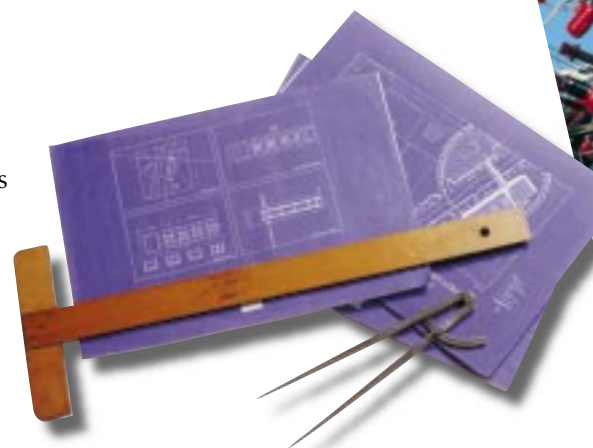
- Access to existing services
- Enabled cross-searching
- Linking to value-added services such as inter-library loans
- Searching across different media types
- Access to a wide range of sources

These will be supported by appropriate technical developments to provide secure access for users, enabling them to discover resources, locate them, retrieve and use them in their work.

Inevitably, the DNER is a complex entity with many different aspects. Some of its key organisational elements include:

- JISC-funded resource providers
- Portals
- Third party content providers
- Infrastructure service providers

The JISC-funded resource providers will include the data centres, other service providers such as AHDS (Arts and Humanities Data Service), the Data Archive, NESLI (National Electronic Site Licence Initiative), NISS and the UK Mirror Service. The JISC already has a number of agreements with third party content providers which provide access to resources produced outside the education community, and it will continue to build on these. The infrastructure service providers include, for example, existing inter-library loan services, the proposed inter-library loan service for electronic documents and other electronic delivery services. But what makes the DNER really distinctive from the users' point of view is the range of portals, which will each be designed to suit a particular user orientation.



The user will access the DNER through a range of different access points, or portals. To date, seven different categories or types of portal have been identified.

## JISC or Central Portal

This is a cross-service access point, which would support a searchable catalogue of collection-level descriptions of datasets (see the ROADS-based pilot at UKOLN, UK Office for Library and Information Networking, <http://roads.ukoln.ac.uk/jisc-ccc/cgi-bin/search.pl>), and could transfer the user to a Data Centre or third party provider for in-depth searching. The AHDS Gateway (<http://ahds.ac.uk>) is a useful example of this type of portal, offering a cross-search but also linking directly to the AHDS targets, to allow users to view more detailed data or carry out more focused searches with localised, tailored interfaces.

## Subject-orientated Portals

These will provide access specifically targeted to particular subject or discipline groups. They may be encompassed within the RDN (Resource Discovery Network, <http://www.rdn.ac.uk>) subject gateway hubs, expanding the range of hub activity from identification of collections of resources to searching within and across those resources.



### Local Portals

These are essentially hybrid library developments, allowing tailored access to a selection of datasets of importance to an institution, plus integration with other locally licensed datasets and local products. Local portals will in most cases be set up to consult local resources first, such as the local OPAC (Online Public Access Catalogue) or local CD-ROMs, before external or charged services. They will offer good links to local resources such as short-loan collections.

### Media-specific Portals

These will be orientated to the requirements of particular media types. An obvious prototype is Digimap (<http://edina.ac.uk/digimap>), designed to help the user find and obtain maps or data subsets based on digital mapping products. Others might include video data, audio data, numeric data and dynamic data.

### Data Centre Portals

This is the current approach, where the portal is usually restricted to the datasets offered by a particular Data Centre. Localised interfaces to resources, such as EDINA's (Edinburgh Data and Information Access, <http://edina.ac.uk>) own query screens for EDINA datasets, remain important and valuable, fulfilling a different need. These native interfaces could be enhanced to support cross-searching of other Data Centres' datasets, or delivery from another Centre's document databases.

### Curatorial Tradition Portals

This category includes portals orientated to, for example, the museums and archives communities. One example is the current HE Archive Hub procurement (<http://www.kcl.ac.uk/projects/srch/actives/coreact/inpro.htm>). Some of the services will be particularly challenging – object delivery of a castle, for example, is not possible, even for the JISC!

### Enriched Interface Portals

This type includes portals which use novel or non-traditional aids to finding information, such as voice-recognition, tune recognition, image-content-orientated searching and so on. Many of these technologies are on the horizon – for example, Digimap is both a media-specific portal and an enriched interface portal – but for the moment this is included as a separate category because of the need for substantial further development in this area.

The DNER is set to become *the* major innovation in UK education in the coming year. As the JISC achieves its vision of integrated services and interfaces, the DNER will affect everyone across the education and research community, whatever their role. To keep up with the latest developments, and for further information about the DNER, please see: <http://www.jisc.ac.uk/pub/index.html>



## The Resource Discovery Network (RDN)

**A** major new network of discipline-based gateways or 'hubs' has been set up to provide students, lecturers and researchers with better access to high quality resources on the Internet. The Resource Discovery Network (RDN) will catalogue and link to web sites containing a wide range of educational materials. For the first time, users will be able to run

*'For the first time, users will be able to run interdisciplinary searches'*

**interdisciplinary searches, using the RDN's sophisticated cross-searching software across the discipline-based hubs.**

The RDN was launched on Friday 19th November at a well-attended event at the Congress Centre, London. Welcoming speeches were given by Lynne Brindley, Pro-Vice-Chancellor (Communications and IT) and University Librarian at the University of Leeds and Professor Howard Newby, Vice-Chancellor of the University of Southampton and President of the CVCP (Committee of Vice-Chancellors and Principals).

The RDN is organised initially into five hubs, located at various universities around Britain: BIOME (Medicine and Life Sciences) is led

by the University of Nottingham; SOSIG (Social Sciences, Business and Law) is led by the University of Bristol; HumBul (Humanities) is led by the University of Oxford; EMC (Engineering, Mathematics and Computing) is led by Heriot-Watt University; and PSIGate (Physical Sciences) is led by the University of Manchester, on behalf of the Consortium of Academic Libraries in Manchester.

The RDN is at present funded by the JISC, the Arts and Humanities Research Board (AHRB) and the Economic and Social Research Council (ESRC). It is managed by the RDN Centre, based at King's College, London and the University of Bath. See: <http://www.rdn.ac.uk/>

## ISI Web of Science® UK Launch

The JISC is negotiating access to a wide range of important datasets in order to provide ever-increasing amounts of high quality information for teaching, learning and research as a part of its content provision for the DNER (see pp. 6-7). The latest of these agreements, which gives the UK education community access to the *ISI Web of Science*®, was celebrated at a launch event hosted by Sun Microsystems on 9 November at their London offices.

Speakers included Mary Auckland, Director of Library and Learning Resources at the London Institute, who welcomed guests to the launch, saying that the event also celebrated the relationship between the JISC and ISI (Institute for Scientific Information), which dates back to 1991. Professor Sir

Brian Fender, Chief Executive of the HEFCE (Higher Education Funding Council for England), said that for over a decade the ISI Citation Databases have been one of the most heavily accessed files in the UK HE system. By moving those valuable databases to the new *Web of Science*® interface, he felt that 'the age of the database has come into its own'.

The *ISI Web of Science*® is the powerful web interface providing access to the *Science Citation Index Expanded*™, the *Social Sciences Citation Index*® and the *Arts and Humanities Citation Index*®. The database covers over



8,000 journals and combines high quality bibliographic material, citation indexing and the power of the web. The new service is hosted by MIMAS at Manchester Computing and is available to subscribing institutions, at: <http://wos.mimas.ac.uk>

## Virtual Environments for Learning

The JISC, through its Technologies Application Programme (JTAP), has funded projects concerned with the development of teaching and learning through electronic course materials and interactive web-based resources, better known as 'virtual learning environments'. This article describes three of these projects and their different approaches to learning via the web.

**COSE** (Creation of Study Environments) provides facilities for the creation and private sharing of content by both tutors and learners. The unit of delivery in COSE is a 'learning opportunity' that includes links to web-based resources. The philosophy of the system is one where a 'course' is a group of people who are assigned learning opportunities and can work in a flexible and collaborative way. Learning opportunities can be 'published' into the COSE system, making them accessible to all users of that COSE server. Both tutors and learners can search the system for resources, gather and organise references to the material found, then re-use that material in their own COSE Pagesets. The system runs on a standard web server and runs through a standard web browser interface (eg. Netscape). The system provides facilities for:

- Bulk creation of learner

accounts and learner (course) groups

- Quality assurance mechanisms for content publication
- Learner tracking
- Formal submission of work

**Learning Landscapes**, produced by the TOOMOL project, provides a personal tool that incorporates an address book, resource manager, web browser and email client. Although Learning Landscapes resembles Netscape's Communicator, its structure is specifically designed to support learning activities. The address book allows information on students' learning to be stored and accessed and the resource manager allows learning resources to be indexed, categorised, annotated and described with metadata, and accessed through the browser. People and learning resources can be combined to create

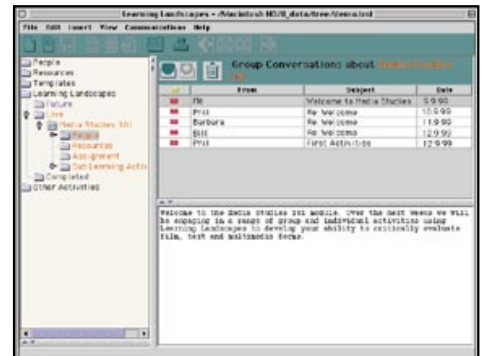


Figure 2: context-based group conversations in Learning Landscapes

learning activities, to which assignments and further learning activities can be added. Learning activities are emailed to students and automatically installed on their copy of Learning Landscapes, which gives them access to allocated learning resources, assignments, and information on other course participants. Learning Landscapes enables context-based email discussions, giving access to a private one-to-one thread of email discussion, or to a context-based group discussion for course participants (figure 2). And since the system relies only on email, it can be as easily set up within a single course as across a whole institution.

**CoMentor** supports debate and collaborative work in a rich environment for discursive learning. Tools include shared whiteboards, document entry and annotation facilities, concept-mapping tools, threaded discussion lists, recording tools and role-playing features, which operate through a standard web browser. Students and teachers can use coMentor from various universities throughout the world. CoMentor incorporates a wide range of subjects which include philosophy and nursing as well as the currently more dominant



Figure 1: the COSE environment

Continued on p. 10

# Information Access and Security Workshop Report

## 'Protecting Your Information: Enabling Access to High Quality and Accurate Information'

**A**lthough the words **protection and security suggest an attempt to prevent people from doing something, 'information security' is about enabling access to information. This was the general view at an information security workshop entitled 'Protecting Your Information', which was run by JISC Assist in November as part of its C&IT strategic issues series.**

Secure access to information is a management issue rather than an IT or technical issue. The British Standard for Information Security Management, BS7799, provides a roadmap and framework for developing an Information Security Policy. Building on previous work, the JISC has funded a pilot to examine whether this framework can be adopted by HE in guiding its approach to managing security. The workshop addressed the strategic and legal issues faced by UK HE in context of the findings of this pilot and discussed whether a generic Information Security Policy could be developed.

There was overall agreement that BS7799 provides an excellent framework and provides a good

start for every institution in developing its Information Security Policy – there is no need to develop a BS7799 equivalent for HE. Another notable consensus was that an Information Security Policy is an enabling mechanism and emphasis should be placed on access to information rather than protection of information.

The provision of guidance on legal issues was raised as being of paramount importance. Legislation such as the Data Protection Act 1998, Computer Misuse Act and Freedom of Information Act will all impinge on shaping our Information Access Policies. BS7799 can provide a framework for institutions to help them comply with these Acts.

### Outcomes and Recommendations from the Workshop

- Continue work on BS7799 and frameworks for creating, implementing and monitoring information security policies; produce starter packs
- Provide a series of awareness-raising activities targeted at specific groups
- Provide more discussion-based activities and facilitate discussions with institutions

- Provide guidance on legal issues in conjunction with the legal community
- Ensure all activities are congruent with the aim of secure Single Sign On

These recommendations are being taken forward, many in conjunction with other professional organisations working in this area, to ensure consistent advice. The workshop report and copies of the presentations made at the workshop are available at:

[http://www.jisc.ac.uk/assist/work\\_past.html](http://www.jisc.ac.uk/assist/work_past.html)

### Further Information

The 5th JISC Information Strategy Conference, "Security and Access", will be held on 10 February 2000 at The British Library (see p. 11 for details). JISC Assist has published a Senior Management Briefing Paper on the Data Protection Act (see p. 11 for details) and further Briefing Papers on key issues are planned, including guidance on implementing other forthcoming legislation. The JISC Assist series of workshops and seminars on C&IT strategic issues will continue in the new year. Contact JISC Assist for further information.

*Continued from page 9*



Figure 3: CoMentor

science subjects. The system was designed in response to research into what students felt would aid their learning, and user-centred evaluation has been employed throughout.

These three projects have each contributed significantly to the rapidly developing field of virtual learning environments. Each project now has a finished product, available at little or no cost to universities, so that wide take-up is anticipated.

Please see the project web sites for further information:

#### COSE

<http://www.staffs.ac.uk/COSE/>

#### TOOMOL

<http://toomol.bangor.ac.uk/>

#### CoMentor

<http://comentor.hud.ac.uk/>

Work on virtual learning environments is being continued under the JISC Committee for Integrated Environments for Learners (JCIEL).

## Events Timetable

### 5th JISC Information Strategy Conference, 'Security and Access'

**Thursday 10 February**

The British Library, Euston Road, London

A one-day conference exploring the human and organisational issues around security and access in HEIs. Possible topics include the 1998 Data Protection Act, security awareness, authentication, plagiarism and appropriate non-technical issues arising from the JISC Assist workshop on 'Protecting Your Information' (see p. 10).

Contact Amber Thomas  
Email: amber.thomas@nottingham.ac.uk or  
Tel: 0115 846 6054

### JISC Information Strategies Initiative Workshop, 'Developing an Information Strategy: Planning the Implementation'

**Wednesday 16 February**

Birkbeck College, Malet Street, London

Contact Amber Thomas  
Email: amber.thomas@nottingham.ac.uk or  
Tel: 0115 846 6054

### JISC C&IT Strategic Workshop, 'Managed Learning Environments'

**Tuesday 29 February**

Woburn House, Tavistock Square, London

Contact JISC Assist  
Email: assist@jisc.ac.uk or  
Tel: 0117 954 6850

### JISC C&IT Strategic Workshop, 'Managed Learning Environments'

**Tuesday 7 March**

Chancellors Conference Centre Moseley Road, Manchester

Contact JISC Assist  
Email: assist@jisc.ac.uk or  
Tel: 0117 954 6850

### JISC Information Strategies Initiative Workshop, 'Developing an Information Strategy: Roles and Responsibilities and Drafting the Information Strategy Framework Document'

**Wednesday 15 March**

Birkbeck College, Malet Street, London

Contact Amber Thomas  
Email: amber.thomas@nottingham.ac.uk or  
Tel: 0115 846 6054

### Workshop 28

**Tuesday 21–Thursday 23 March**

Heriot-Watt University, Riccarton, Edinburgh

Contact Wendy Salmon at UKERNA  
Email: w.salmon@ukerna.ac.uk or  
Tel: 01235 822 236

### JISC Information Strategies Initiative Workshop, 'Developing an Information Strategy: Monitoring and Review'

**Wednesday 10 May**

Birkbeck College, Malet Street, London

Contact Amber Thomas  
Email: amber.thomas@nottingham.ac.uk or  
Tel: 0115 846 6054

<http://www.jisc.ac.uk/events/index.html>

## Recent Publications

### DNER (Distributed National Electronic Resources) vision document

This new publication describes the JISC's vision for the DNER: what it is, what it will include, how it will be organised and implemented and where to find more information.

### Data Protection Act – Senior Management Briefing Paper No. 9

A new briefing paper describing how the Data Protection Act 1998 will affect HEIs when it comes fully into effect on 1 March 2000.

### JISC Brochure

A new brochure giving a brief overview of the whole range of the JISC's work, described in non-technical terms for the widest possible readership.

### JISC Services Flyer

This new flyer gives a brief description of each of the JISC services and where to get more information about them.

All these publications are available free of charge from JISC Assist (email: assist@jisc.ac.uk, tel: 0117 954 6850) or from the JISC web site, at: <http://www.jisc.ac.uk/>



## Stop Press: Athens Service

JCAS (JISC Committee for Authentication and Security) has agreed that the Athens service to the HE community should continue to run for at least three more years. JCAS is currently developing a programme of work to provide a comprehensive middleware infrastructure based on Athens and international standards (where available). It is planned to spend the next six months defining a 'general solution' and there will be extensive consultation with the community during this period.

### Further Information

JISC Assist provides a first point of contact for help and guidance on issues relating to the JISC and the use of information systems and information technology. For further information and advice, contact JISC Assist by email at:

**[assist@jisc.ac.uk](mailto:assist@jisc.ac.uk)**

Or telephone JISC Assist on:

**0117 954 6850**

Information about new developments and major strategic issues is provided to the community through a mailing list to which anyone can subscribe. Send the message:

**join JISC-ANNOUNCE *YourFirstName YourLastName***

to:

**[mailbase@mailbase.ac.uk](mailto:mailbase@mailbase.ac.uk)**

**Joint Information  
Systems Committee**

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