JISC

inform

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Excellence and expertise

Providing world-class support for education and research

An interview with Professor David Eastwood of HEFCE

Making the most of the JANET network

New funding for digitisation of major resources

'JISC is pivotal in ensuring that the UK has the platform on which to operate'

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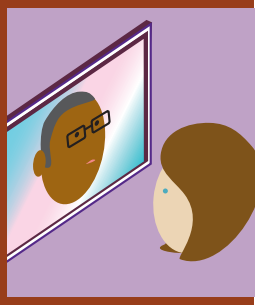

'Funding for a further 16 projects has just been announced'

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www.jisc.ac.uk

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JISC inform is produced by the Joint Information Systems Committee (JISC) to raise awareness of the use of Information and Communications Technology (ICT) to support further and higher education in the UK. Contributing authors include members of the JISC family of services and initiatives, JISC's partners and staff working in the FE and HE sectors.

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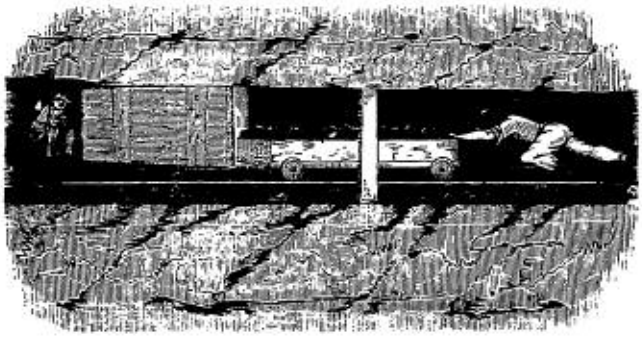
A new and freely available resource has the potential to transform not only our understanding of British history but also how we are currently governed. Liam Earney reports

Fresh perspectives



'The drawer is... harnessed by means of a chain attached to the "sled"; the other end of the chain passes between his legs, and fastens in front to a belt round the waist'. From 'Employment of Children', 1842.

One of the first online resources to be made available by the newly formed mutual trading company, JISC Collections, is already helping to transform our understanding of a century of vital importance to UK history.

The House of Commons Parliamentary Papers 1800–1901, made available through agreement with Proquest Information and Learning, contains 6,000 volumes and over 4 million pages of 19th-century parliamentary Bills, House papers, Command papers, treaties, statistical data and committee reports.

Many contributors to the papers were found outside the official world, providing evidence or supplying memoranda to committees and commissions, among them Matthew Arnold, John Stuart Mill, Michael Faraday, Charles Babbage, Marconi and Keynes, alongside thousands of others.

Enthusiasm expressed by academics and researchers around the country during the consultation for the agreement was unprecedented. Colin Brooks, Director of the HE Academy Subject Centre for History, Classics and Archaeology at the University of Glasgow, and one of those who responded to the consultation, says that the new resource has the potential to bring fresh perspectives to the study of the 19th century, but could also have further important effects: 'It will I think transform student understanding of the legislative process and also incidentally improve understanding of our contemporary political system. Offering students such easy access to a wealth of new perspectives is an excellent step forward.'

The resource would, without the JISC agreement, cost institutions around £35,000 each. This figure comes hard on the heels of a value for money report which shows that similar national agreements for online resources in 2004–05 resulted in savings to the education community of over £26m.

But however important, financial savings are only one benefit of the new agreement. The new resource also has the potential to support the use of other resources either currently available or soon to be launched. Colin Brooks points in particular to the 18th-century Parliamentary Papers currently being digitised at the University of Southampton as part of the JISC digitisation programme (see pages 16 and 17) as a resource which could benefit – and benefit from – the new online collection.

'The availability of both resources together,' he says, 'would underline recent developments in 18th-century scholarship which insist upon the lively interest in rethinking Parliament's role. It would be another nail in the coffin of the old view that sees 1832 as the beginning of "reform". The type of availability that the JISC agreement has made possible will I think transform use, quantitatively and qualitatively.'

iStockphoto.com

For further information, please go to: www.jisc-collections.ac.uk/

inbrief

JISC and Becta launch UK Federation

JISC and Becta announced the launch of the UK Access Management Federation in November. The Federation represents the centrepiece of JISC and Becta's significant investment in developing and implementing next generation access management systems on behalf of the UK education and research community.

Collaboration between JISC and Becta is ensuring a consistent approach to access management throughout UK education, from schools through FE, HE and research sectors.

For further information, please see article on page 20,
or go to: www.jisc.ac.uk/federation
and www.ukfederation.org

Successful bids totalling £5.5m announced

November saw the announcement of the successful bids under the first round of funding of JISC's capital programme. Representing an investment of nearly £5.5m, 27 projects are being funded under the e-learning, e-infrastructure and repositories and preservation strands of the programme.

The first call under the programme – which represents a total investment of some £81m over three years – was issued in April of this year in response to which nearly 100 bids were received. A second call was issued in September totalling around £15m of further funding. Successful bids under this call will be announced shortly, while a third call will be issued in April of this year.

For further information, please go to:
www.jisc.ac.uk/capital

JISC and SURF launch 'Licence to Publish'

JISC and SURF have published a model agreement that will help authors make appropriate arrangements with publishers for the publication of a journal article. The 'Licence to Publish' is the result of several years of international consultation and aims to establish a balance of rights and interests in the emerging scholarly communications environment.

The agreement is available in both Dutch and English and can be used for publications involving more than one author.

For further information, please go to:
http://copyrighttoolbox.surf.nl/copyrighttoolbox/authors/licence/

Minister welcomes SuperJANET5

SuperJANET5, the upgrade to the JISC-funded JANET network, was launched at an event in London in October. The newly enhanced network for UK education and research operated by UKERNA has a potential user base of some 18 million people across UK education and research.

Speaking about the cross-sectoral implications of the newly enhanced network, Phil Hope MP, Minister for Skills, said at the launch event: 'Digital technology is not just changing the way we learn but helping to drive up standards in the education system. This Government is committed to helping teachers improve their skills and use of ICT where it can enhance their teaching and help bring lessons to life.

'The SuperJANET5 programme means that primary and secondary schools, colleges and universities can communicate and collaborate securely and reliably. The video-conferencing and other technology under the programme will allow them to share learning and link into the UK's world-class higher education research facilities and other resources.'

For further information, please go to page 11 and:
www.ja.net

The value of JISC: new report published

A report which assesses JISC's value to the education and research community has been published. Among its findings are:

- For every £1 JISC spent on national agreements for e-resources the saving to the community was at least £26
- For every £1 of the JISC services budget, the education and research community receives at least £9 of demonstrable value
- For every £1 spent by JISC on the provision of e-resources, the return to the community in value of time saved in information gathering is at least £18

The report uses a variety of measures, such as benchmarking, cost comparisons, calculation of time and effort, and other mechanisms. A report on the value of JISC's development activities is currently being prepared.

For further information, please go to:
www.jisc.ac.uk/valueformoney

International partners work together in Berlin

A highlight of JISC's involvement in December's Online Educa conference – the largest e-learning conference in the world – was a policy session, 'Where does European Policy meet National Strategy'. At the session representatives from JISC and SURF – JISC's counterpart organisation in the Netherlands – were invited to respond to European Commission leads from Patricia Manson, DG Information Society & Media and Marujia Gutierrez-Diaz, DG Education & Culture.

The focus of the session was on European policies in relation to lifelong learning and the take up of ICT to bring about a more inclusive society. During discussion, it was agreed that there ought to be improved dialogue between the Commission and national organisations, focusing upon ICT research and infrastructure provision.

Further information on these developments will be available in the New Year.

For further information please go to:
www.jisc.ac.uk

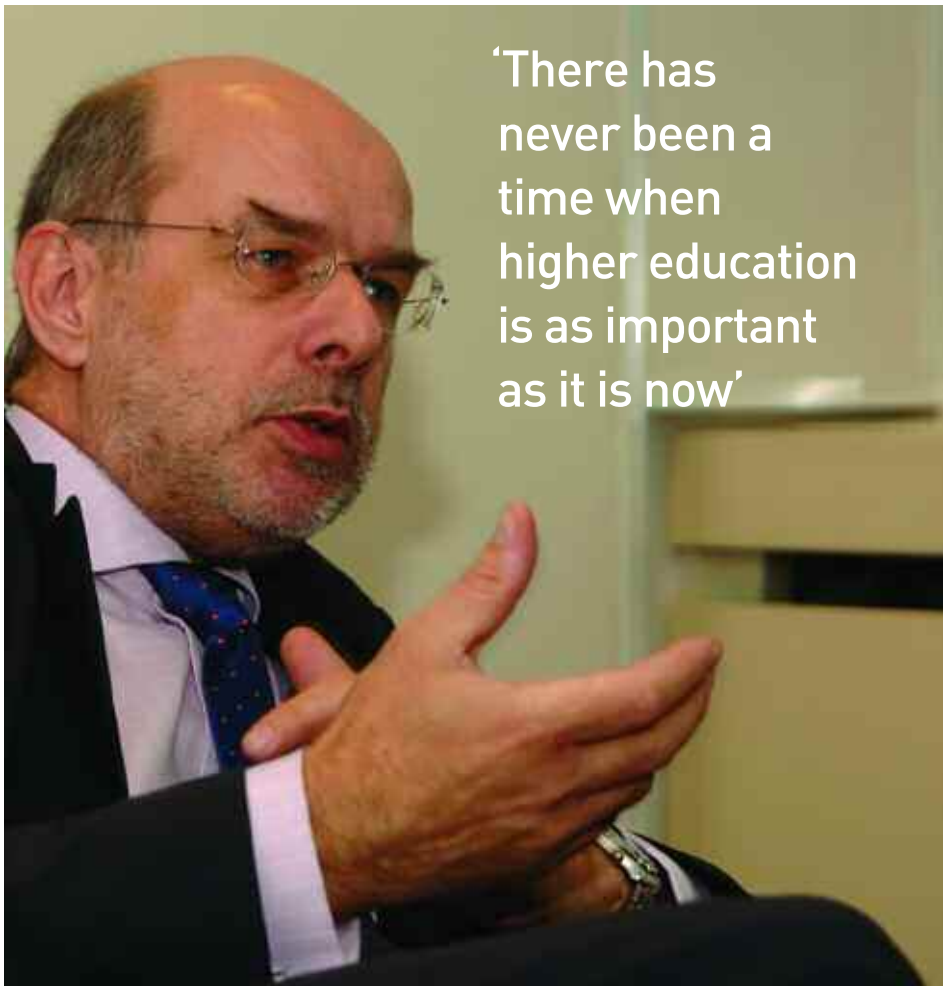
Professor David Eastwood recently took up post as CEO of HEFCE. In this exclusive interview with *JISC inform*, he talks about the challenges facing the English higher education sector and why he thinks investment in universities, people, ideas – and ICT – is crucial to its future

An interview with Professor David Eastwood, CEO of HEFCE

Leading from

By most indicators the quality of higher education in this country is second only to the USA. But, although achieved with investment less than the OECD average, we shouldn't, says HEFCE's new CEO, imagine such a position to be 'God-given'. Neither, he adds, should we imagine our competitors consider it so either.

David Eastwood has hit the ground running. Having taken up post only last September, he is clearly enjoying the challenge of leading HEFCE at a time of immense change for the English higher education sector. 'There has never been a time when higher education is as important as it is now,' he says, at HEFCE's London headquarters on the 28th floor of Centrepoint. 'It's vital for the country and the economy, it's vital for individuals, for learners and graduates. Most of the jobs created over the next 10 years will be graduate jobs. We have to make sure our funding is appropriate for that environment, that it enables us to keep ahead of our competitors.'



Investing in education and research

With a new fees system in place, HEFCE's overarching objective is, he begins, to work with the sector to ensure that the new system works, that the sector reaps the benefits of the extra investment it's now receiving.

Indeed investment might be the word that best exemplifies the new CEO's vision and approach – whether it be investment in infrastructure, people or ideas – as a means of maintaining and indeed enhancing English higher education's global position in education and research. 'The ability to invest in what is world-class,' he says, 'to invest in what is educationally transforming, will be pivotal in the future.'

Challenges are highlighted, however, by figures which show that, by comparison with other developed countries, private sector investment in research and innovation in the UK is modest. 'There are exceptions,' says Professor Eastwood, 'such as the pharmaceuticals,

interview

the front

'The ability to invest in what is world-class, to invest in what is educationally transforming, will be pivotal in the future'

biomedicine and defence industries. But what this means is that it's the investment that goes in through the public sector that enables us to compete. That's why our universities are so important if we are to continue to have ideas and innovation which are able to be made commercial.'

There are a number of strands to this task, it seems. The first involves creating the appropriate conditions at the national level, through investment in blue skies research and the provision of infrastructure, for the sector to build on traditional strengths, but also for it to develop its less obvious ones. This, says Professor Eastwood, involves a significant role for technology: 'As much as in the big sciences, IT has played a key role in the creative industries, in art and design, from computer aided design to computer games, and a lot of that is done in small and medium sized enterprises. That is going to be important to our economy. We need to concentrate on the big and beautiful, but also on and the small and beautiful. For that we've got to have the infrastructure and JISC is pivotal in ensuring that the UK has the platform on which to operate.'

'Third stream'

So-called 'third stream' activities – supporting universities in their engagement with industry and with local and regional communities – previously through the HEROBC (Higher Education Reach-Out to Business and the Community) and now through the HEIF (Higher Education Innovation Fund) programmes (see inset box, right), represents another important strand of work, together with support for engaged teaching and research. 'We've just announced another £60m for business-related research through our mainstream research funding,' he says. 'We're trying to get the interface between institutions and business more finely tuned and seamless. Universities' capacity to do the kind of research industry might want to commission will be vital.'

A new strand in JISC's recently published strategy (2007–09) provides support for these activities. 'Our activities are designed to support institutions build the platform they need to spin out innovation,' says Professor Eastwood. 'That has an important IT dimension. JISC will have a role to play in ensuring that the platforms we employ will be appropriate.'

Ensuring wider access to higher education is yet another important strand of activity aimed at wider economic and social goals. 'We've made substantial progress in the last decade towards getting 50% of under-30s into higher education, with the figure currently at 42%. Remember that back in 1960 it was 6%. That's a transformation. We now have a mass higher education system. Achieving 50% is a challenge which may not be achieved in the next three or four years, but I think it will be achieved in the early part of the next decade.'

The value of ICT

David Eastwood has been many things in a long career in higher education – lecturer and historian, researcher, head

Sidenotes

Third stream – activities which enable HE and FE institutions to engage with business and the community, in order to enhance the contribution of education to the economy and society

HEROBC – Higher Education Reach-Out to Business and the Community programme. HEFCE's first third-stream programme, which ran from 2000 to 2004

HEIF – Higher Education Innovation Fund. HEFCE's current third-stream programme

JISC strategy (2007–09) – a new strand of JISC's recently published strategy emphasises JISC's role in 'developing and implementing a programme to support institutions' engagement with the wider community'

of department, dean and vice-chancellor. But it was as CEO of the-then Arts and Humanities Research Board (now Council) that he first experienced at first hand the potential of ICT to enrich education and research.

'The AHRB had responsibility, along with JISC, for the Arts and Humanities Data Service,' he recalls, 'and while I was there we set up a number of important digitisation initiatives.

'They were important projects and everyone noticed them. But at least as interesting in research terms was the fact that there were a lot of projects which had gone on for years on card indexes in shoeboxes which would have taken a couple of people a lifetime to complete and which suddenly could be done by small teams with appropriate IT capacity in just two or three years.

'So we weren't just doing digitisation projects, and not just giving the arts and humanities an IT capacity. We were also pioneering ways of using that very creatively.'

He remains enthusiastic about ICT's potential to support learners, but sees the need for universities to adapt to new and increased expectations. 'Students who are entering universities have an inbuilt expectation', he says, 'that the keyboard is the means of communication rather than the pen, that the routes into knowledge and information are significantly electronic rather than paper-based.

'They'll increasingly expect HE to replicate all of that. So what's going to happen within the not-too distant future is that all campuses will be wireless, everyone will own laptops and e-learning packages will be very much part of the learning experience. Many of the interfaces between the student and the institution, in terms of applications, enrolment, checking up on progress, assessment and so on, will be largely electronic. Some universities are already a long way down that line.'

The 'Google danger'

But enthusiasm is tempered with a note of caution and by a warning against what Professor Eastwood terms 'the Google danger': 'You get to a point where it looks as if all information is equally valid and all knowledge is of equal status. One of the things that universities have traditionally done through a variety of means is to create a hierarchy within the resource of a library.

'JISC is leading in this, but we need to have the electronic equivalent of that hierarchy, to devise appropriate search engines for academic and research use, but also to spend some time working with students to challenge and enrich their understanding of the information environment that we all inhabit. Otherwise what is distinctive, important and profound about a university education could start to get lost.'

Professor Eastwood praises JISC's role in investing in institutional and other repositories as a means of widening access to research and other content, calling its approach 'valuable and right', and puts forward something of a hypothesis: 'Imagine the world without JISC,' he suggests. 'We simply wouldn't be able to compete, we wouldn't have the structure, the platform. We wouldn't have made the headway, in digitisation, in freeing up access. We would be at a much more rudimentary stage of e-learning and we would have been dependent on commercial solutions. And we wouldn't have the edge which having JISC means we have.'

But if ICT, as a complement to more traditional forms of learning and to what Professor Eastwood calls the 'vital and dynamic face-to-face interaction' between learner and teacher, is important now, its importance will in the future, he says, grow stronger, supporting the wider mission of the sector: 'We don't know where we'll be in 10 or 15 years' time. Crystal balls are cloudy. But I think that universities will change in some form and the virtual will be more important.

'What is sure is that HEFCE will continue to invest at the cutting edge of

interview

'Imagine the world without JISC. We simply wouldn't be able to compete, we wouldn't have the structure, the platform'

innovation so that we'll be as well placed as we can be as a country to respond to the challenges.'

And far from taking English HE's global standing for granted, HEFCE's new CEO sets his ambitions for the sector higher even than its current position: 'I think the future for higher education institutions in this country is strong. There is real strength in the system. I think in 10 years we will compete in a global environment, for students, for staff, for reputation.

'Our ambition for the next 10 years in an increasingly competitive environment is for English HE to remain world-class, that is to say, that we continue to do world-leading research and that the quality of education that students receive should be best in class.'

For further information, please go to: www.hefce.ac.uk

e-research

Collaboration on large-scale scientific and engineering projects is about to get easier for UK researchers thanks to a major upgrade to the JISC-funded National Grid Service

Building on success

The National Grid Service (NGS) pools the resources held on computers at four core sites and an increasing number of associate sites at universities. NGS users sign on and have access to these resources as though they were on their own desktops. Software called middleware enables this to happen with little or no user intervention.

The resources include computational power and data storage capacity. Users are able to undertake larger scale computer-based challenges than would be possible using local resources alone. They are also able to collaborate with other remote users, forming virtual organisations which are social structures of people who have agreed to share resources in some manner for a period of time. The aim is to support innovation and collaboration in academic research across a wide range of disciplines.

A new briefing paper has been produced which provides an introduction to grids and the NGS. To access the briefing paper, please go to: www.jisc.ac.uk/publications

The NGS, which also has funding from the Engineering and Physical Sciences Research Council and the Central Laboratory of the Research Councils (CCLRC), is led and coordinated from the CCLRC's Rutherford Appleton Laboratory in Oxfordshire. The Universities of Manchester, Oxford and the White Rose Grid at Leeds provide the other core sites, with CCLRC and Manchester providing the data storage capacity and Oxford and Leeds providing computation capacity. The national high performance computing facility can also be accessed via the NGS.

A programme to expand the resources available at these core sites began in October 2006. It will see data storage capacity nearly triple to more than 100Tb by mid-2007 and computing power increase by 300%. 'We'll be expanding our resources, which will bring benefits to users including the capacity to perform larger and more complex operations more quickly and easily,' says Dr Andrew Richards, NGS director.

Plans are also afoot to upgrade the NGS's middleware with the aim of making the service easier to use and more widely interoperable. 'These developments will benefit users who want to use NGS facilities in combination with resources held elsewhere, for example regional grids within the UK and international grids such as EGEE (European Enabling Grids for E-sciencE) and the US Teragrid,' says Dr Richards.

The NGS has teamed up with the organisation that develops middleware, the Open Middleware Infrastructure Institute UK (OMII UK), to ensure that the needs of NGS users are fed into future middleware development.

The NGS also has plans to add new services, such as visualisation, access to facilities and data repositories and is drawing up a roadmap for their introduction. 'Our aim is to develop the service to the point where it will provide integrated, coherent access to the full range of the UK's computation and database research facilities, together with a range of sophisticated services to support novel collaborative and cross-resource activities,' says Dr Richards.

Judy Redfearn
JISC/EPSRC

For further information, please go to:
www.grid-support.ac.uk

High-speed bandwidth connectivity is crucial to UK education and research. However, as important are the JISC-funded network services, provided by UKERNA, which allow colleges, universities and other learning organisations to take advantage of one of the fastest, most secure and resilient education networks in the world. In this special feature, we look at how these services provide a vital support to an ever-wider community of users

Connecting people and organisations

The JANET network continues to develop and grow. The recent launch of SuperJANET5, the upgrade to the network, means that it's not only further education, higher education and the research community which are linked to the network, but now also the country's primary and secondary schools sector. That means a user base of some 18 million people, all linked to the network – and to each other.

Brian Turtle is Director of the Belfast Institute and chair of JISC's committee for networking, the body made up of representatives from colleges, universities and other organisations which drives JISC's work in this area. He says that the strength of the JANET network is that it allows communication between people.

'The JANET network is firstly a tool for communication,' he says, 'between academics and academics, teachers and teachers, and between teachers and their students. It's a virtual learning infrastructure in that not only does it enable these interactions to take place but also delivers the resources such as datasets, journals and multimedia collections, which we all use in learning and research.'

> **'JANET is about quality. It's always on and its great strength is that people don't know it's there'**

The upgrade to the network, which will provide connectivity at the rate of 10Gb per second – that's around 5,000 times faster than the average home broadband connection – allows larger and increasingly sophisticated online resources to be accessed quickly and easily. 'JANET is also about quality,' continues Brian Turtle. 'It's always on and its great strength is that people don't know it's there. Because it's vital to so much of what we do in education now, it's in the background. Its resilience has now been enhanced too with SuperJANET5.'

Another strength, he continues, is its variety: 'The smallest primary school and a research institute with massive bandwidth requirements can both now use the network in their very different ways. JANET is now serving a very diverse community.'

As if to illustrate the point, JANET will next month be linked to UKLight, the UK's dedicated optical network for the research community. The massive bandwidth requirements of research teams such as those using radio telescopes or particle accelerators can cause problems for standard network users. But UKLight, with its points of presence across the UK and with links to similar networks in the USA, Canada and the Netherlands, keeps these uses separate, supporting collaboration across institutions as well as internationally.

Services which allow greater flexibility of access to the network include the JANET Roaming service

Another recent development is the JANET Voice Advisory Service, a new support service provided by UKERNA, which focuses on giving free advice to organisations connected to JANET on how they can use the network to carry voice traffic, something that's becoming increasingly commonplace both in education and research and in the

continued on page 14

JANET and its services

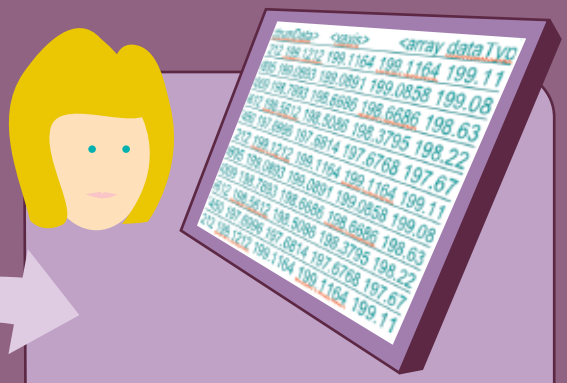
JANET is the foundation stone upon which UK education and research continue to engage with ICT. However, a considerable part of its value lies in the wide-ranging and high-quality support services provided by UKERNA. These include customer support, mail, security, videoconferencing and multicasting services, domain name registration, web services and training. A selection of these services and facilities are depicted here.

Security
Security is crucial to the use of ICT and central to the needs of UK education and research. One example of security services provided by UKERNA is JANET-CERT, which raises awareness about security threats to the network, helps prevent them and assists institutions in the handling of those threats.

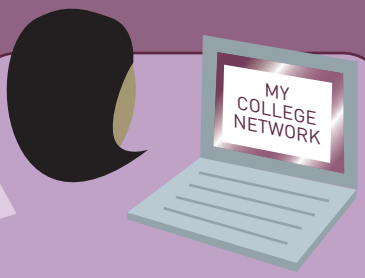
The JANET Backbone
The JANET network now links research institutes, universities, further education as well as the schools sector. It runs at 10Gb per second, which is 5,000 times faster than the average home broadband connection.

Videoconferencing
Videoconferencing services provide access to the most up-to-date facilities to support learning, teaching and research are available free at the point of use.

Access to multimedia content
Secure, reliable and high-bandwidth connectivity allows students and staff to access a wide range of the most up to date e-resources available to support their learning and teaching.



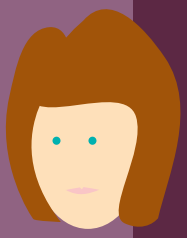
UKLight
UKLight is the UK's contribution to an international high-bandwidth optical network for the research community, with links to Canada, the Netherlands and the USA. It will be linked to JANET in February.



Roaming
Services which allow greater flexibility of access to the network include the JANET Roaming service which allows roaming network access at JANET-connected sites for students and staff across the UK.

Vice Chancellors and Principals

'My organisation benefits enormously from a national approach to network provision. Not only does such an approach bring value for money but a range of services that allow my organisation to make best use of the network.'

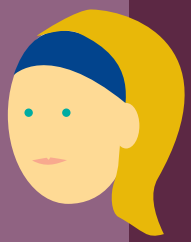


Heads of IT Systems

'Security, flexibility and value for money are crucial to ensuring that my institution is able to make the most of the network. Services such as JANET-CERT, JANET Roaming, the Videoconferencing Technical Advice Service (VTAS) and many others ensure that we have world-class support services available at no extra cost.'

Heads of IT user services

'Training and support services provided by UKERNA are up to date and of the highest quality, ensuring that my staff have the latest information and best support available to serve the needs of all our users.'

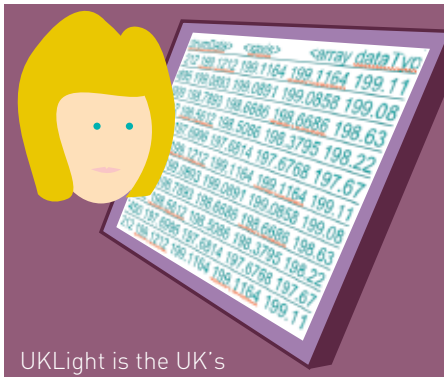


Researchers

'I need to be able to transmit huge amounts of data while collaborating with other researchers at other locations, institutions and sometimes in other countries. UKLight gives my institution dedicated bandwidth which supports this level of collaboration, while the Access Grid gives us access to advanced videoconferencing facilities across multiple locations.'

Lecturers and teachers

'Videoconferencing facilities are supporting more flexible delivery of learning and teaching, while increasing bandwidth allows me to refer my students to a growing range of multimedia resources, available for downloading or streaming, to support their learning.'



UKLight is the UK's contribution to an international high bandwidth optical network for the research community

'With network safety a massive concern at present, JANET services provide vital security for institutional networks'

home. Brian Turtle says that the service is a good example of how new uses of the network are emerging all the time, uses which call for appropriate support services so that educational organisations are able to exploit the new technologies.

'There are all sorts of additional services provided by UKERNA, which means that institutions are able to make the most of the network. The Voice Advisory Service is a recent one, which gives advice on how to use the network as, in effect, a telephone network. This can mean a reduction in costs and lead to greater efficiency. The videoconferencing service is another highly successful example of a service providing important efficiency gains. The roaming service brings flexibility to network use by enabling visitors to other institutions to access their own network.'

With network safety a massive concern at present, JANET services provide vital security for institutional networks too. JANET-CERT raises awareness about security threats to the network, helps prevent them and assists institutions in the handling of those threats. A recent value for money report concluded that if JANET-CERT didn't exist, similar commercial services would cost the educational community at least three times more than the current cost of the service. Economy gains through national provision of such services are replicated across the dozens of support services provided by UKERNA.

But as new uses of the network proliferate and as the needs of educational organisations evolve, so JANET will continue to reinvent itself. 'An important priority for colleges and universities at the moment', says Brian Turtle, 'is how they engage with their communities, both business and social communities. JANET can be a massive tool for building relationships between academics and community organisations of all kinds.'

But the story doesn't end there, he continues: 'It might seem strange to raise the question "where do we go next?" when we have so recently seen the launch of the newest upgrade to the JANET network. But such is the nature of the technology and the requirements of the research and education communities as they seize the opportunities offered by new technologies, that planning has already begun for the successor to SuperJANET5.'

Anticipating the future, it seems, is also part of what makes JANET and its services the national success stories they have proven to be.

Philip Pothen
JISC

For further information, please go to:
www.ukerna.ac.uk

The Regional Support Centre (RSC) in Wales has been working closely with Welsh colleges and partner organisations to evaluate colleges' use of ICT. Dicky Maidment-Otlet speaks to the RSC's manager

A measure of success

A major initiative which has seen all Welsh colleges evaluated for their use of ICT could have important implications for colleges in England too.

So says Pete Scott, manager of RSC Wales, whose staff have been closely involved in the groundbreaking benchmarking exercise in the principality. 'The programme was initiated by DELLS, the funding council for Wales,' he says. 'The Assembly Government wanted to measure the effectiveness of the investment they've been making in e-learning in Wales.'

The RSC supported the exercise using Becta's Matrix system which required each of the 24 colleges in Wales to evaluate themselves. The system measures against five levels of maturity – from 'localised', 'coordinated' through to 'transformative', 'embedded' and finally 'innovative' – enabling organisations not only to measure their performance in different areas of activity but also to develop action plans for further development.

'A report on the initiative has praised the RSC's "critical" role in ensuring the success of the project'

'The benchmarking obviously needed to be fair and equitable,' says Pete Scott. 'So we were asked to moderate the exercise. Our impartial approach meant that the organisations could trust us to have a consistent approach across all organisations. It also meant that the funding council could be confident that the results would be a fair reflection of the state of e-learning in Wales.'

The RSC visited all Welsh colleges, talking to senior managers and other key staff – including the ILT Champions which support each of the 24 colleges in the principality – and supported the colleges in evaluating which stage they were at in terms of vision and planning, learning and teaching, staff development, MIS and administration and IT management.

'The result was a rich and highly detailed picture of the state of the nation,' says Pete Scott. 'Colleges learnt a great deal about themselves and the whole process has given them a lot of invaluable intelligence.'

'As for the results,' he continues, 'they showed a sector which has made great strides in developing and implementing ICT. There's room for continued development in some areas, especially in translating best practice across all departments, but the picture is a very healthy one.'

For the RSC too, the initiative has provided some important insights. 'We at the RSC know a lot more now,' says its manager, 'especially about colleges' additional activities. We've discovered a lot of good practice which we didn't know about before. We've also strengthened links with senior managers and our profile has risen too.'

A report on the initiative has praised the RSC's 'critical' role in ensuring the success of the project and there are plans to conduct the exercise again in late 2007 to give a more dynamic picture of distance travelled and to inform future decisions about further investments. RSC manager Pete Scott says that the exercise has been watched closely by policy makers in England where the initiative could in time be replicated.

'It's been a really important exercise for us to be involved in. We have an invaluable evidence base for activities in e-learning and for the significant investments which are being made in ICT in Wales. While results show that the position in Wales is a healthy one, we're looking forward to supporting the sector build on that solid foundation in the future.'

For further information, please go to:
www.rsc-wales.ac.uk

Just as projects in JISC's Digitisation programme are beginning to deliver resources of enormous value to UK education and research, funding for a further 16 projects has just been announced. Journalists Harriet Swain and Olga Wojtas explore a newly launched resource and (opposite) one that will benefit from the new round of funding

A wealth of resources

The changing face of Britain

Chris Galley once had to wait until term ended at the college where he lectures before accessing data central to his research into 19th-century infant mortality. His nearest information sources were in London – too far to travel from Barnsley College, where he teaches geography. Now, he can access it all without leaving his desk.

This is thanks to work funded by JISC and carried out by AHDS History at the University of Essex to put online nearly 200,000 pages of population data from between 1801 and 1937.

The project, launched this month, is one of six that make up JISC's £10 million Digitisation programme. It aims to put online primary research material that has previously been difficult to access and also covers 18th-century Parliamentary papers, archival sound recordings, 19th-century British newspapers, medical journals and news film.

The new population resource will make a wealth of information related to population figures in the British Isles easily available to the general public, as well as to demographic and local historians.

Researchers will be able to study, at their leisure, and on their own computer, data relating to gender, and in most cases age, of the UK's population, and how it varied from parish to parish, county to county and year to year throughout the 19th and early 20th centuries.

They will also be able to study fluctuations in employment and migration patterns, in the number of inhabited and uninhabited houses, in the number of children born, in the depopulation or development of different areas of the country and how healthy – or not – places were to live in. The relatively simple statistics offer a complex insight into the ebb and flow of human lives.

This is all information already available in hard copy – somewhere. The problem for researchers has been finding out which university library, government department or local institution holds it, and then carefully leafing through the often crumbling pages of a report to find what they need.

The project has now done this work for them. 'We have had to do some detective work to track reports down so we can find copies we can use,' says Matthew Woollard, project director for the Online Historical Population Reports Project. He says that while the project isn't about preservation, it is about making an increasingly scarce resource easily available for future academic researchers.

Sir Tony Wrigley, Professor of Geography at the University of Cambridge, says it is the kind of resource that could eventually form the basis of a sixth form or university project.

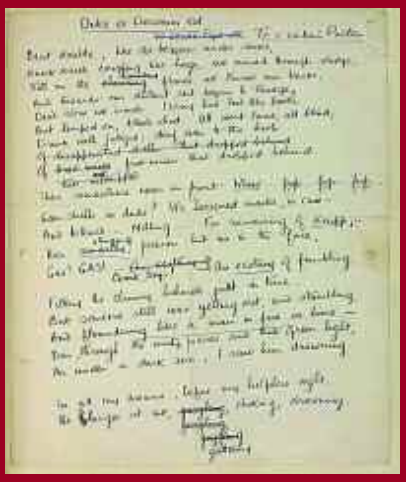
But, as a researcher, he sees its primary value in what it offers for geographic and demographic historians, and to genealogists too. 'An exercise of this sort enables people who otherwise wouldn't be able to afford the time to make use of the data,' he says – people just like Galley.

Harriet Swain

For further information, please go to:
www.histpop.org.uk

inform plus

These articles are edited versions of longer articles available on the web. To read the articles please go to: www.jisc.ac.uk/inform



Sharing treasures, preserving memory

The 90th anniversary of the Armistice is in November 2008. And that date will also see the launch of the final collection of a remarkable archive, giving new insights into the Great War.

The World War One Poetry Digital Archive is rooted in a project that began a decade ago. Wilfred Owen, who died in combat in France a week before the Armistice, wrote some of the conflict's most poignant poetry.

His manuscripts, letters, medical and war service records – material previously scattered across a range of archives – are now available through the Wilfred Owen Multimedia Digital Archive, developed by Oxford University Computing Services with JISC funding.

The archive broke new ground as one of the first multimedia collections designed specifically as a teaching resource. It is now part of a broader, award-winning site on World War One poetry.

This offers a series of seminars, ranging from an introduction to poets such as Wilfred Owen and Siegfried Sassoon, to comparing the work of the British war poets with that of soldiers from other nations. One seminar uses Owen's haunting poem, 'Dulce et Decorum Est', (see picture above) to look at the various stages in creating an edition of a work, examining different manuscript versions, and determining which will be the basis of the published work. Current project manager Kate Lindsay says: 'Often poets go through many iterations. It's very interesting to see what's crossed out and which words are used instead.'

When JISC's recent digitisation call went out, the Oxford team proposed building on their success, and have now secured around £500,000 for the World War One Poetry Digital Archive. The two-year project will create digital images of primary source material, such as manuscripts and letters, from major poets, alongside images and audio and video clips from the Imperial War Museum. Members of the Oxford team have travelled to Flanders to film the trenches of the Somme.

The new archive will build on the ethos of the existing one in showing teachers how they can use its multimedia resources in the curriculum. It will offer both teachers and researchers easy ways to personalise their pathways through the site. But it also aims to attract the broadest possible audience.

The Oxford team is frequently contacted by people accessing the site, offering family memorabilia from World War One for inclusion in the archive. The community collection is likely to be launched in the summer before the Armistice anniversary. 'It's really exciting. People still have a lot of things in their attics, such as photos and diaries,' says Ms Lindsay. 'This is a resource that everybody can use, and that's why it was so successful first time round.'

Olga Wojtas
Scottish editor
Times Higher Education Supplement

For further information, please go to:
www.oucs.ox.ac.uk/ltg/projects/jtap

JISC Digitisation Programme:
www.jisc.ac.uk/digitisation_home.html

Virtual Research Environments (VREs) are bringing widespread benefits to researchers in a range of subject areas. Alice Gugan looks at how three projects in JISC's VRE programme are creating collaborative online environments and breaking down physical barriers between researchers

Making the virtual

Material benefits

For scientists finding defects and stresses in materials, instrument time is expensive and difficult to obtain. Known as 'beam time' because of the beams of X-rays or neutrons used to probe the materials, it can only be obtained at large and highly specialised facilities both here and abroad.

Professor Philip Withers leads ISME at the University of Manchester, a project which is setting up a virtual research environment allowing materials scientists and other specialists to work together, share results in real time and make the most of beam time.

'We send out groups of people working 24 hours a day to get the data,' he says. 'Teams work together but not all can be on site. Previously teams would communicate by phone or email, but now those at the experiment site can be supported remotely by specialists, such as instrument scientists and industrial engineering experts, through the VRE. It allows them not only to send huge amounts of information and share findings, but provides a space for discussion too. Someone might have an idea and provide a sketch for it and invite others to comment. Now key decisions can be joint decisions.'

Material scientists at Manchester have been working closely with users to develop the user-oriented aspects of the VRE making it easy to use, while collaborators at Cardiff University have focused on its technical requirements. The result is a set of accessible tools which have the needs of users at heart. 'Beam time is precious,' says Professor Withers, 'so the immediacy of the VRE brings more minds to bear on challenging experiments, which for us is invaluable.'

For further information please go to:
http://pwlinda.mt.umist.ac.uk/~isme/

Political history

Late last year 12 historians from 8 UK institutions convened for an inaugural virtual seminar. Such was its success that members of this brand new Virtual Research Group – numbering 21 historians from 13 institutions – have decided that this is how they will 'meet' on a monthly basis from now on.

This is just the latest development in the History of Political Discourse 1500–1800 Virtual Research Environment project, funded initially by JISC to pilot VRE technologies and capabilities within the context of a taught MA course, and further funded by the British Academy to extend the reach of the programme.

As Simon Hodson, the VRE's Project Manager, explains, such a new way of working is in direct response to a much greater need for communication in a research environment that has been transformed over the past few decades. 'Too often collaborative projects in the Arts and Humanities lose momentum because contributors cannot meet with the frequency required. And as momentum is lost, so the coherence of the final output is dissipated. By using the collaborative technology provided by a VRE, the research group will be able to meet, exchange views and work together with the sort of regularity and intensity that will not merely maintain momentum but transform the character, style and dynamics of the debate.'

invent

real

The project, a partnership between the Universities of East Anglia and Hull, works across two technical platforms, Access Grid for the videoconferencing technology, and Sakai for the web-based document-storing and communication-enabling. Joint virtual research seminars for its MA course are already taking place on a regular basis, with the University of Sheffield having recently joined in for a pilot session.

For further information, please go to:
www.earlymoderntexts.org

'the immediacy of the VRE brings more minds to bear on challenging experiments'

Meeting of minds

A project that began by using the advanced videoconferencing technologies available on the Access Grid is seeing its software used in a range of exciting but unexpected ways.

The Memetic project has been looking at how software can help support remote or virtual meetings across multiple sites, providing a rich record of what takes place. Michael Daw, manager of the project at the University of Manchester, says that with such virtual meetings becoming more and more commonplace across collaborating institutions, there is the need to have more flexible records of meetings available.

'Those attending meetings, as well as those not able to be there, need to be able to see how decisions were reached,' he says. 'We use software called Compendium to provide annotations of key points in meetings by adding icons such as a plus sign for someone agreeing with a point, a hammer and gavel for a decision, and so on. These create index points in meeting records, so providing an intuitive way of navigating what may be a long recording. In this way, reviewing sessions becomes much easier.'

So far so good. But what has been remarkable about the project is the way in which these tools have been taken up in a variety of contexts. 'People have been using it to annotate PowerPoint slides in seminars and workshops, for focus group type situations, and to evaluate performance art,' says Daw.

'It can also help administrative staff who are minuting highly technical meetings that are full of jargon – index points are created so that parts of the meeting can be watched again when writing up later. By opening up new ways of using the available infrastructure, Memetic is adding value to the UK's investment in the Access Grid.'

Memetic is a collaboration between the Universities of Manchester, Southampton, Edinburgh and the Open University.

For further information, please go to:
www.memetic-vre.net

middleware

The newly launched UK Access Management Federation represents the centrepiece of JISC and Becta's significant investment in developing and implementing next generation access management systems. Guest journalist Mark Samuels gives his view on what these new developments will mean for UK education and research

Connecting people

Priorities seemed so simple once. But more than ten years after Tony Blair's famous 'education, education, education' speech, a decade in which technology has transformed teaching and research, education is itself increasingly concerned with something else: 'information, information, information'.

It is not that priorities have shifted away from the student or the researcher, rather that the means to deliver and receive educational content have changed. Online learning, for example, allows lessons to take place anytime, anywhere, while virtual research collaborations are changing the ways in which research is undertaken.

In response to such changes, JISC and Becta recently announced the launch of the UK Access Management Federation – a system based on technologies such as Shibboleth – which represents an important step on the route to single sign-on for resources hosted by multiple sources such as those provided by publishers. The Federation represents a next-generation alternative to Athens, the existing access management service that centralises institutional authentication processes.

JISC services director John Robinson says federation – which will give control of the authentication process back to institutions – is a whole order of magnitude more functional than currently available systems. 'It gives institutions greater control and technical capability to be an identity provider,' he says.

Athens will not cease working overnight, but will move from its current fully funded status to a subscription-based service after July 2008. It is, therefore, important that institutional decision makers are ready to make informed decisions about federation.

However, a JISC-commissioned study recently discovered that 'there is a very wide spectrum of awareness, understanding and preparedness between institutions'. Higher education institutions are ahead, with 71% of HE organisations intending to adopt federation by July 2008 – compared to 31% of further education colleges.

There is much work, then, to be done. Robinson says two factors are key to federation preparedness: a high level of technical capability and a high level of management buy-in. He also says

innovate to resources

> 'education is increasingly concerned with something else: "information, information, information"'

institutions often have to make difficult choices about resource allocation, especially when cash flow is tight.

'But the benefits of federation will come later if processes are improved,' says Robinson. 'Identity management is a concept that needs to be grasped. It's technical – your members often work online now and at a distance, and the institutions that manage identity better will be more successful.'

JISC's outreach programme, which begins in early 2007, will help ensure the federation message is pushed out to as many as institutions as possible, with the longer term desire of 95% system uptake by 2011. A specialist team is being formed that will target appropriate educational organisations for training. Robinson says the outreach activities will adapt over time to meet evolving institutional needs.

> 'the institutions that manage identity better will be more successful'

'We're going for early adopters first, so people can see how federation works – the quick wins,' he says. One such institution is the London School of Economics and Political Science (LSE), one of about 30 organisations already given funding for federation projects by JISC.

Masha Garibyan, project and communications officer at LSE, describes the university as an 'early, early adopter'. LSE was one of the first institutions to start using Shibboleth and has run a series of access management projects since September 2000. She says early adoption has helped the university understand its technical capabilities. 'We've evaluated our systems,' she says. 'And although it's never easy to get management buy-in, the awareness of federation is very high at LSE.'

Crucial to such high awareness has been the university's decision to converge information resources – that is, computing and library services: something the JISC survey discovered less than 40% of institutions have attempted.

The university's most recent access management project, PERSEUS (Portal-Enabled Resources via Shibbolized End-User Security), addressed the potential for creating a Shibboleth-based portal for information resources. The two-year project, which started in July 2004, has now finished. However, JISC has granted the project a one-year extension to support the wider Access Management Transition Programme.

Garibyan says the initiative has been very successful at raising LSE's and other institutions' awareness of access management – and she is hopeful many organisations will be able make the switch to federation by 2008. 'It will be possible to get the early adopters on board and those that have the structures in place,' she says. 'You just then need to convince the senior management that the rest will follow.'

Linking out to relevant organisations beyond the academic remit is also important, says Garibyan: 'It's key that publishers join as quickly as possible because that is a key driver for institutions – and here, the outreach programme will be vital.'

Perhaps successful federated access to information is all about 'education, education, education', after all.

Mark Samuels
Editor of *Computing Business* and Features Editor of *Computing*

For further information, please go to:
www.jisc.ac.uk/federation
www.ukfederation.org

A new JISC programme which offers innovative ways of developing tools for education and research is about to launch. Alice Gugan reports on what the programme expects to deliver

A community of practice

'The potential for the learning, teaching and research world to gain from using social software as a tool is enormous'

If the user community itself were consulted closely at the beginning of a programme and as an integral part of it, would the resulting programme of development emerge somewhat differently? A new programme of activity will be testing this theory in what is a groundbreaking pilot for JISC.

The Users and Innovation programme model has an unprecedented level of user engagement which will directly influence ensuing development work. The users in question will be brought together into a specially formed Community of Practice, working both face-to-face and online to look at new technologies and the opportunities they offer.

As part of their work, they will assess the way higher education practice is changing, and suggest projects of work to see how the two could productively be combined. The Community of Practice will have six months to discuss and bring forward proposals for development activity.

Lawrence Hamburg of the Higher Education Academy is a supporter of the programme. 'It's an ambitious target but then this is a new venture,' he says. 'All praise to those behind the programme. For the first time we will see the full engagement of the sector in its evolution. This iterative cycle model, working user feedback directly into the fabric of a programme, could build the foundation for the way future calls are worked up.'

The programme is innovative not least because the specific development the community will lead in is in the area of social software, or Web 2.0. In other words virtual communities will share and discuss information online, an activity integral to both the process and the outcomes of the programme.

'The potential for the learning, teaching and research world to gain from using social software as a tool is enormous,' says Lawrie Phipps, Programme Manager. 'In involving a real community in the process, we hope to ensure that multiple areas of perspective are included in the development process, and that those ideas are grounded in reality.'

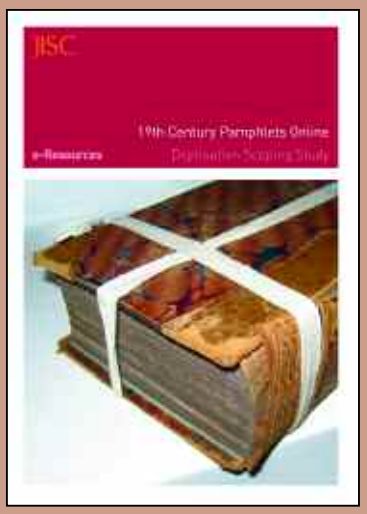
Alice Gugan
JISC

Bidding for taking part in the Community of Practice is now closed, but progress on its development can be followed on a dedicated Users and Innovation blog at:
http://involve.jisc.ac.uk/wpmu/u-and-i

Publications

JISC Annual Review 2005-2006

www.jisc.ac.uk/publications



19th Century Pamphlets Online
Digitisation Scoping Study

JISC: its value to the education and research community

Events conferences, workshops and seminars

JISC Conference 2007

13 March 2007
International Convention Centre, Birmingham

David Eastwood (Chief Executive, Higher Education Funding Council England) and Tom Loosemore (Project Director, BBC 2.0) will be the keynote speakers. The conference will reflect the breadth of JISC activities in providing guidance, advice and opportunities for the use of ICT in education and research and will be of particular interest to:

- Senior managers and those responsible for developing and implementing policy and strategy
- Staff who play a role in supporting the use of ICT in educational organisations, including practitioners
- Staff with responsibility for e-resources within their institution
- Teachers and researchers with an interest in the use of ICT

E-Journal Archiving and Preservation Workshop
Providing an overview of e-journal archiving requirements and solutions
27 March 2007
British Library Conference Centre

Next Generation Symposium
27 April 2007
Birmingham

Capital Programme Town Meeting
9 May 2006
Birmingham

www.jisc.ac.uk/events

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www.delni.gov.uk

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