

focus

on **UKOLN**

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Digital Curation Centre: Updates on Registry Development and the International Conference

Following its launch in November, the DCC led by its new Director, Chris Rusbridge, is implementing a programme of training workshops, site visits and events designed to raise awareness of the DCC and its activities. These have included a meeting with the JISC Preservation Programme projects. Later this year, the 1st International DCC Conference will be held at the Hilton, Bath, UP over 29-30 September 2005 with the Opening Keynote given by Graham Cameron, Associate Director of the European Bioinformatics Institute. The Closing Address will be delivered by Clifford Lynch, Executive Director of CNI.

The DCC is also developing practical services including fact sheets, briefing papers, tutorials, FAQs and a curation manual. Furthermore, the DCC has set up an Associates Network, open to all institutions in the HE and FE sectors served by JISC, and to all research organisations, individuals and groups engaged in digital curation and preservation. The Network has a Web-based Discussion

Forum for Associates for the exchange of views, information and expertise. The DCC development team is in the process of investigating a distributed model for the long-term curation and preservation of resources. Current work centres on the design and implementation of a Representation Information Registry and Repository (DCC-RR). Representation Information (RI) is used as in the context of the OAIS model, meaning all information that may be necessary to access and understand the information content of a digital data object. Persistent access to RI is the key to long-term curation and preservation of digital information. The team also seeks to facilitate interoperability and automated processing of digital information. (See the document *DCC Approach to Digital Curation*.) The DCC will be giving a demonstration at the JISC Conference in Birmingham in April.

SWMLAC ICT Masterclass Programme 2005

The first South West Museums Libraries & Archives Council (SWMLAC) ICT Masterclass Programme offers a unique professional development opportunity for staff in the Region. The innovative Programme covers aspects of leadership, strategic management, organisational development and the management of change. Part 1, *Positioning the Sector in the Global Knowledge Space*, held in Bristol in January, was led by Liz Lyon with presentations from Jonathan Drori, Director, Culture Online, Graham Barrett, Head of IT Services, Test Valley Borough Council, and Liz. The Masterclass Programme has been developed by members of the SWMLAC ICT Steering Group and is a key element of the Regional ICT Strategy.



Photo courtesy of University of Edinburgh and Douglas Robertson Photography

HRH Prince Philip, Chancellor of Edinburgh University, meets Melvyn Cornish, University Secretary, during his visit to the DCC in February.

UKOLN is funded by MLA: the Museums, Libraries and Archives Council, the Joint Information Systems Committee (JISC) of the Higher and Further Education Funding Councils, as well as by project funding from the JISC and the European Union. UKOLN also receives support from the University of Bath where it is based.



Duck Chins Anyone?

DC is pretty much a staple part of the resource discovery menu these days. It was also on the real menu, in the unusual form (by UK standards!) of Duck Chins, at an excellent restaurant visited on the final night of the Dublin Core International Conference in Shanghai last October. But it wasn't all play: the two UKOLN staff who attended the conference contributed to a very successful event, e.g. by leading tutorials, chairing working group meetings and contributing editorial effort to the DC Usage Board. In general, UKOLN staff continue to make a significant contribution to the work of the Dublin Core Metadata Initiative. Two recent activities are worth highlighting. Firstly, the DCMI Abstract Model, jointly authored by staff at UKOLN and the Royal Institute of Technology in Sweden, has recently become a DCMI Recommendation. Secondly, UKOLN staff have helped set up a new joint ODRL-DCMI working group, with the aim of improving the combined use of the ODRL 'rights' markup language and DC descriptive metadata records.



Andy Powell presenting as part of the tutorial track at DC-2004
[Photo courtesy of Stu Weibel, OCLC, banner of Harry Wagner, OCLC]

Distributed Registries, More or Less?

In the last **focus** we took a brief look at the JISC IE Service Registry and considered what standards it should support in order to integrate into the service landscape most effectively. Since then UKOLN has taken part in an IESR workshop, which sought the views of the community about this important service. One issue that needs to be considered is that of centralisation. Given that we are likely to see the development of multiple service registries in the UK context and beyond, both at institutional and national level, we probably need to consider the IESR as one component in a widely distributed network of service registries. Therefore, we need to try to reach agreements about how such registries are going to cooperate, both at a technical and a policy level. One critical question to be answered is whether the current suite of Web service standards, like UDDI, are the right way of distributing our service registries or whether we'd be better off adopting 'digital library' approaches like the OAI-PMH as our underlying transport protocol. Like the DNS, it seems likely that the closer we can hold the data in the service registries to the data owners, the better. And like the DNS, the success of the service can probably be measured by how invisible it becomes!

Collection Description Focus: More Case Studies

Collection Description Focus has published two more titles in its Case Study series, which records experiences with various implementations of collection description databases. Case Study 3 by Rachel Perkins describes the Collections Navigator at the Natural History Museum as an "efficient and effective complement to item-level cataloguing". Case Study 4 by Chris Turner at MLA describes the Cornucopia database of collections held by cultural heritage institutions throughout the UK. The case studies are available online or as hard copies.

Semantic Interoperability in Digital Library Systems

UKOLN has been responsible for the coordination and co-authoring of a state-of-the-art overview of activities and research in areas relating to semantic interoperability in digital library systems. This has recently been completed as part of the DELOS cluster activity of WP5: Knowledge Extraction and Semantic Interoperability (KESI).

A major aim of the report is to integrate views from overlapping communities working in the area of semantic interoperability; these include: semantic web, artificial intelligence, knowledge representation, ontology, library and information science and computer science.

Definitions of interoperability, syntactic interoperability and semantic interoperability are presented noting that semantic interoperability is very much about matching concepts as a basis. The overall goal of semantic interoperability is to support complex and advanced, context-sensitive query processing over heterogeneous information resources. The report examines several areas in which semantic interoperability is important in digital library information systems, these include: improving the precision of search, enabling advanced search, facilitating reasoning over document collections and knowledge bases, integration of heterogeneous resources, and its relevance in the information life-cycle management process.

The report also investigates some theoretical issues such as clarification and selection of relevant terminology, standardisation and interpretation and the differing levels of semantic interoperability in digital library environments. It notes that information structure, language and identifiable semantics are prerequisites of semantic interoperability, as is consensus building and standardisation.



Are You Service-Oriented?

There seems to be an increasing tendency to adopt a Service-Oriented Architecture (SOA) approach to modelling our information and service landscapes. The most obvious examples of this in our community are the JISC E-Learning Framework (ELF) and the related eResearch-focused Virtual Research Environment (VRE), though there are also similar activities elsewhere, for example, the SAKAI and VIEWS initiatives. While this approach appears to work well, both as a tool for making informed policy decisions and as a way of developing and deploying interoperability standards, it can result in a complex matrix of services.

We need to find ways of presenting a more coherent view of our somewhat messy service landscape (including the JISC IE) and reach agreements, preferably at an international level, about how to document the 'reference models' being built up through these kinds of activities. One recent activity worth taking a closer look at is the US Digital Library Federation's Framework Working Group, which is trying to identify ways of documenting our environment from the general (a high-level 'business requirement') right through to the specific (a 'deployed service' on the network).

SPP Delivers Portal Software

The Subject Portals Project (SPP), funded by JISC, has recently completed Phase II. The principal aim was to develop portal tools for subject-based communities. All eight RDN Hubs participated in the project, with UKOLN providing project management and ILRT the technical lead. At the same time as developing beta subject portals for each of the RDN Hubs, the project has made the resulting software available as open source. The objective was to develop portable functionality, by creating a series of 'portlets' or modules, designed to sit within a portal framework. The portlet approach means that Hubs (and other users) have a choice of the functions they install.

The portlets build on the core functions (authentication, customisation and user data storage) and include cross-searching, newsfeeds, alerting, and 'additional services' such as e-journal searching. The software complies with the key emerging portal standards: Web Services for Remote Portlets (WSRP), the communication protocol which allows portals to aggregate remote portlets, and JSR168, the Java portlet standard. This means that SPP portlets can be embedded in third-party portal environments, such as uPortal.

Forthcoming Events

JISC Conference

12 April, Birmingham, UK

Ninth DELOS Network of Digital Excellence

thematic workshop: Digital Repositories: Interoperability and Common Services
11-13 May 2005, Heraklion, Crete

IASSIST/IFDO 2005

24-27 May, Edinburgh, UK

MIMAS Open Forum 2005

29 June, Manchester, UK

IWMW 2005

6-8 July, Manchester, UK

ALT-C 2005

Exploring the frontiers of e-learning: Borders, outposts and migration

6-8 September, Manchester, UK

AHM 2005

Innovating through science

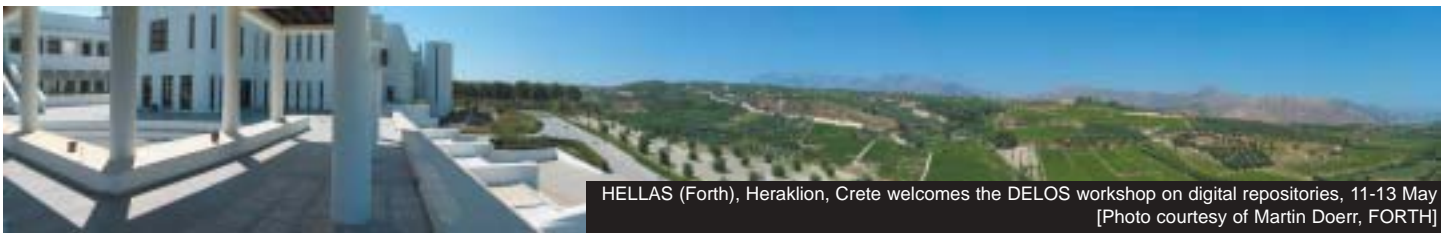
19-22 September, Nottingham, UK



Digital Cultural Content Forum - organised by UKOLN on behalf of MLA - at The Mill and Old Swan Conference Centre, Minster Lovell, Oxfordshire. [Photo courtesy of Initial Style]

1st International Digital Curation Conference

29-30 September, Bath, UK



HELLAS (Forth), Heraklion, Crete welcomes the DELOS workshop on digital repositories, 11-13 May [Photo courtesy of Martin Doerr, FORTH]

Please note that the names of authors of all items in **focus**, together with references and URLs are available at <http://www.ukoln.ac.uk/focus/>

Revealweb Captures New Data

New contributors to the accessible formats database include the North Wales Society for the Blind and the Scottish Braille Press. The database now has 110,738 titles, with 97 organisations on the register of suppliers.



It has been welcomed by users like John Godber of RNIB. Using a laptop PC, wirelessly connected to a BBC Internet 'listen again' page, he was enjoying a play based on a book. Through the wireless connection he then connected to Revealweb, and located a Braille copy at the National Library for the Blind (NLB). Pasting the details into the email link for NLB he requested the item, which arrived three days later. He says, "It couldn't be easier. No more wondering if you've got the strength to ask for and wade through catalogues from various organisations; no more having to make several phone calls. It's now easier for me as a blind person to borrow a book than it is for a sighted person. I don't have to wait for the library to open. Revealweb is 24/7."

Ann Chapman of UKOLN, who produced the bibliographic standard for Revealweb, continues to provide advice to the Database Management Group and is a member of the Policy Advisory Group.

Focused Deployment and Use of Collaborative Tools

We are currently seeing interest in new Internet applications, including instant messaging, Internet telephony, Blogs and Wikis. One of UKOLN's roles is to provide a technology watch on emerging networked technologies and help ensure our communities are aware of their potential.

A joint UKOLN/UCISA workshop was held in Leeds in November 2004 on Beyond Email: Strategies for Collaborative Working and Learning in the 21st Century. During the event delegates had an opportunity to exploit the venue's WiFi network to employ these new tools to enrich collaboration with fellow delegates. The feedback on the event was very positive. However a number of potential dangers were identified, such as disruption, distraction and legal concerns, to which a narrow focus on new Internet-based authoring applications could perhaps leave us vulnerable. Other factors identified included security and administration issues regarding both resources and infrastructure, as well as scalability issues ranging from 'chatroom overload' to accidental overwriting of resources. Many issues responded to social solutions chosen by analogy to a corresponding real-life situation, for example a chaired meeting.

Deployment required certain prerequisites to avoid the inadvertent establishment of a two-track system, such as a 'critical enabling mass' of social contacts and a structure that suitably reflected institutional culture and group dynamics. Ultimately, the technologies were felt to be most usefully applied when they played a specific role, particularly for teaching and learning support.

Promoting ICT through People's Network Workshops

The current People's Network workshop series aims to increase engagement with ICT in Public Libraries as part of the Framework for the Future action plan. These workshops seek to advise public libraries in using resources to support excluded groups, create an online community and support access to digital services. Marieke Guy of the Interoperability Focus team attended the London-based *Community Content Creation* workshop in February.

The majority of the presentations given covered online resources that allow ordinary people to create their own content. Peter Brophy introduced the COINE Project, an initiative to allow European citizens to produce narratives, publish sound recordings and display photographs online. People's War, co-ordinated by the BBC, looks specifically at World War 2. Clearly such projects are not only carrying on an important oral tradition but also bringing a generation of people (the over-60s) to the Internet who may never have used it before ('silver surfers!'). One of the key issues that became apparent, and of particular interest to UKOLN, was the need to future-proof the unique records being created.

Chris Rusbridge visits UKOLN

Chris Rusbridge visited UKOLN in his new role as Director of the Digital Curation Centre. Chris talked to the UKOLN-based team and outlined his thoughts on future strategy and activities for the Centre. Liz and Chris will be presenting a paper on the DCC at the forthcoming CNI Spring Taskforce meeting in Washington in April.



Extending the Heaney Model of Collections

Michael Heaney's *Analytical Model of Collections and their Catalogues* provided the underlying model for the development of the Research Support Libraries Programme (RSLP) Collection Level Description Schema. Since then work on various implementations, including the Dublin Core Collection Description Application Profile (DC CD AP) and the JISC Information Environment Service Registry (IESR) has identified the requirement to describe the services that provide access to collections.

Such services are outside the scope of the current model and therefore are not covered specifically in the RSLP Schema. UKOLN has now commissioned Michael Heaney, Head of Service Assessment and Planning, Oxford University Library Services, to extend the model to define the entities and relationships involved. His report is expected to be available at the end of April 2005.

Accessibility Work

Accessibility issues feature in a number of areas of UKOLN's work, and it's an area that is rapidly changing at present. The CETIS-TechDis Accessibility SIG (Special Interest Group) provides a useful forum to learn more about accessibility issues and solutions, through its four meetings a year and its email list. Ann Chapman attended the meeting in York on 16 March.

There were presentations on current issues such as content development, assistive technology and standards, developing an accessible version of the Creation of Study Environments (COSE) VLE software, and implementation of the IMS Accessibility for Learner Information Package (ACCLIP) specification in the Loughborough Personal Profile Project.

Meanwhile, a SiteMorse report of January 2005 cites the low level of compliance with W3C's Web Content Accessibility Guidelines (WCAG) across UK disability organisations' Web sites. The report's methodology, based on use of SiteMorse's automated robot, has been criticised for providing no user testing. However the WCAG guidelines themselves cover areas of accessibility which can be detected by automated tools (e.g. the presence of alt tags for images) and those which require user testing (e.g. relevance of alt tag content).

The SiteMorse report did not address this impasse. UKOLN, working with TechDis and a software developer at University of Bath's e-learning unit has recently published a paper entitled *Developing a Holistic Approach for E-Learning Accessibility* in the Canadian Journal of Learning and Technology, Vol. 30 (3). It argues that the WCAG guidelines provide a valid starting point for addressing Web accessibility, but must address wider issues including usability, resource implications and local factors as well as the needs of e-learning and its learning outcomes. A pre-print of the paper is available on the UKOLN Web site.

eBank UK: Phase 2 Kicks Off

As an interdisciplinary collaboration between chemists, digital librarians and computer scientists, the eBank UK Project has provided a platform for UKOLN to explore the potential use of common technologies for curating datasets and integrating them with digital library architectures. An OAI-PMH repository was created and populated with research datasets from the chemistry sub-discipline of crystallography. A metadata schema to describe the datasets was then designed. User scenarios and a demonstrator were used to show the potential for linking the datasets with the published literature, based on an OAI-PMH architecture.

For UKOLN this has been an opportunity to understand the specific requirements that arise in specialised research communities, and the complex digital objects with which they deal. Phase 2 of the project has recently kicked off with a workshop in which the wider scientific community contributed to the discussions on the descriptive requirements for datasets. In Phase 2 the project will be considering the use of a generic model for the description of datasets and the pedagogic potential of use of research datasets.

TechDis

European Software Patent Directive

A controversial software patent directive is currently awaiting EU Parliament approval. Patents grant an inventor sole rights to an original, non-obvious and novel invention for a limited time. The period for which the patent applies is regarded as sufficient for the inventor to profit while being sufficiently restricted, once the patent expires, to ensure the invention retains its relevance. Patentability of software is controversial; software, like most published material, is already protected by copyright. Software patents in the US frequently result in the patenting of features - ideas - such as one-click shopping or on-line authentication, or expressing rights via XML. This, combined with a patent validity period that exceeds by far the lifetime of any operating system, has given software patents a deservedly bad name. A broad software patent directive is likely to damage the availability or legality of open source software, a particularly worrying prospect for institutions. A reasonable compromise might perhaps involve patentability of software/hardware combinations only, to prevent excessively broad patents. As software patents begin to be introduced in European countries, a shared stance is required. Now is very much the time for action.

Institutional Repositories and the RAE

Since their introduction in the mid-1980s, the periodic Research Assessment Exercises have become a familiar part of the UK Higher Education landscape. A recent report produced by Michael Day for the JISC-funded ePrints UK Project has highlighted some of the ways in which institutional repositories may be able to help support research evaluation processes like the RAE. Perhaps the most promising approach, at least in the short term, would be for institutions to use repositories to manage the metadata about research outputs required for the RAE submission process. The University of Southampton's recent recommendation that its research repository should be used as the central data management tool for RAE 2008 appears to demonstrate the current viability of this approach. In the longer term, it might be possible to use repositories to generate automatically quantitative data that could be used by RAE assessment panels to support their deliberations. There has already been some research into the development of tools for the statistical analysis of citation linking and repository usage data, with promising results to date.

DELOS Review

Members of UKOLN are involved in the DELOS cluster Knowledge Extraction and Semantic Interoperability (KESI) which met in January. The DELOS Network of Excellence Review took place in March with a positive outcome.



Members of the DELOS KESI team during a meeting at UKOLN in September

ePrints UK: Bringing UK Repositories Together

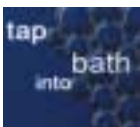
ePrints UK is a JISC-funded project, part of the Resource Discovery Network (RDN), that has developed a service to facilitate the discovery of eprints across all the institutional eprint archives available in the UK. This was primarily a proof of concept project, to evaluate the technical requirements of such a service. Necessary back-end functions are implemented by a harvester that collects records from most UK institutional eprint repositories which are then indexed locally for searching via a Web interface. This service is also exposed via the standard Z39.50 protocol. The service currently offers more than 63,000 records from over 30 different repositories.

The ePrints UK service was developed on a software base derived from the central RDN Resource finder service, and therefore represents a significant reuse of development time. Its internal structure remains similar, with the exception of a few necessary ePrints-specific modifications. The service adds more advanced searching capabilities, such as the option to search a selection of repositories.



(clockwise) David Hill, SWMLAC, Alison Baud, University of Bath Library, Ann Chapman, UKOLN and Councillor Loraine Morgan-Brinkhurst at the Tap into Bath launch
[Photo courtesy of *The Bath Chronicle*]

Tap into Bath Turned On



A former Mayor of Bath joined archivists, librarians and museum curators at the launch of the Tap into Bath database on 8 December 2004. This collaborative project to describe all the collections in the city of Bath was jointly led by the University of Bath Library and Learning Centre and UKOLN. The launch attracted coverage not only from *The Bath Chronicle* and *Ariadne* Issue 42 but also *Guardian Unlimited*.

Staff News

As projects kick off and close, UKOLN is inevitably faced with making farewells as much as welcoming colleagues to new projects.

Thus in October we were sorry to say goodbye to Pete Dowdell who worked as developer on RDN systems from January 2002 and was responsible for the development of the EnrichUK Portal which serves the many projects of the completed NOF-digi Programme. Equally, the R&D Team was very grateful to Amanda Closier who completed her work on user requirements for the JISC Information Environment Service Registry in December 2004.

In October Emma Tonkin joined the Interoperability Focus Team and began work, among other things, on collaborative tools, writing an article for *Ariadne* issue 42 on this topic. This January we welcomed back Marieke Guy on return from maternity leave. Marieke is also working on the Interoperability Focus Team. She has already completed two items for the Spring issue of *Ariadne*.

Google and the JISC IE

Google continues to have a significant impact on our resource discovery habits; the ways in which our own content and services interface with Google and similar services is becoming increasingly important. The advent of the likes of Google Scholar has just served to make more visible what we knew was happening anyway - that much of the community sees Google as their first and foremost port of call. As Lorcan Dempsey said in his regular column for CILIP Update, "increasingly 'on web' means available in Google" and therefore content and service providers need to turn their "systems inside out, and try to make the functionality that was available only within monolithic search systems now available on the open web". How do we respond to this? At a national level we need to ensure that the high-quality material that is made available on the Web through public funding is included in services like Google Scholar. And at an institutional and individual level, we need to ensure that our content is made available in robot-friendly forms and with URIs that will remain persistent over time. A report that considers these issues in more detail is available from UKOLN's JISC IE Web site.

Message from the Editor

Welcome to Issue 2 of **focus** with its mixture of news and comment from across all teams here at UKOLN. All authors and references, including sometimes lengthy urls are available at <http://www.ukoln.ac.uk/focus/>, the Web version. I take this opportunity to thank all the people who have contacted colleagues or myself with comments and congratulations on the first issue of the re-designed newsletter.



UKOLN also publishes *Ariadne*, a Web magazine for information professionals in archives, libraries and museums in all sectors. The current issue is no. 42 while the Spring issue will contain articles, among others, on the nature of trust in global virtual teams and its effect on distributed working, on best practice and dissemination in digital preservation and from the US an article on autodiscovery for rapid information movement.