DL.org *O*utreach & *T*raining – *D*riving *F*orward *I*nteroperability, *B*est *P*ractices & *M*odelling *F*oundations

Editorial

DL.org would like to open this Summer 2010 eNewsletter with a "special thank you" to the experts, both inside and outside the project, who are bringing valuable insights into the challenges surrounding interoperability, best practices and modelling foundations with the aim of taking Digital Libraries to the next level. This is very much the focus of a series of DL.org upcoming events where we will continue to harness expertise in the field and strategic alliances with an eye to sharing these insights with the community and through our educational and training programme. The ultimate goal is to enable the embedding of research into real-world systems, thus opening up new research perspectives, from Cultural Heritage to eScience.

On 17 August 2010 the **DL.org User Working Group** will be presenting at the 8th International Workshop on **Adaptive Multimedia Retrieval** in Linz, Austria. Our **2nd Workshop** on **Making Digital Libraries Interoperable: Challenges & Approaches**, 9-10 September during ECDL2010 in Glasgow, Scotland offers a key opportunity to gain insights into new approaches to interoperability based on a Call for Research and Project Papers evaluated by an International Programme Committee. The outcomes will also inform our **ICT2010 Networking Session** on Global Information Systems for Science and Cultural Heritage: The Interoperability Challenge on Wednesday 29 September in Brussels, Belgium. On the **training front**, our **Autumn School** on **Digital Libraries & Digital Repositories: Modelling, Best Practices & Interoperability**, 3-8 October 2010, Athens, Greece targets practitioners and decision-makers, computer scientists and young professionals to educate them on interoperability challenges, approaches and techniques with expert guidance, hands-on sessions and close interaction with attendees and lecturers alike. Connected with education and training is this summer's **strategic alliance** with **Scientix**, a European initiative aimed at fostering skills development in a fast-evolving scientific and technological landscape.

Our special feature is an interview with **Wolfram Horstmann**, Expert in the DL.org Quality Working Group and Programme Chair of the 5th International conference on **Open Repositories** last July in Madrid, offering insights into the grand integration challenges addressed during the event and how future conferences will build on the achievements attained. The interview is complemented by an overview of our involvement in this conference: a talk in during the session dedicated to Interoperability Policy and a Birds of a Feather session to understand from attendants the connections between the focus of DL.org and the developer community. We wrap up this eNewsletter with a teaser on some recent insights delivered by DL.org **Experts** recently posted on our Blog.

8th International Workshop on Adaptive Multimedia Retrieval –
(AMR'2010), 17-18 August 2010, Linz, Austria
Spotlight on the DL.org User Working Group

The Workshop centres on multimedia retrieval and artificial intelligence with particular reference to feature extraction techniques, computer linguistic approaches, dynamic data analysis methods, interactive machine learning, visualisation methods and user interface design. By bringing together researcher communities from these areas, the Workshop aims to intensify the exchange of ideas with a look at current activities and interconnections.

Within this context, the DL.org User Working Group aims to bring into sharp relief the focus and current outcomes of its investigation into interoperability from the user perspective. The talk, entitled *A Survey of Context-Aware Cross-Digital Library Personalisation*, is presented by Anna Nika (pictured) from the Department of Informatics and Telecommunications at the University of Athens.

The talk is motivated by a recognised need to address not only Digital Library (DL) interoperability but also cross-DL personalisation. DL interoperability calls for the sharing and combining of user information across different DL systems so that they can leverage data and resources from each other. To achieve this goal, DL systems should be able to maintain compliant and interoperable user models and profiles that enable propagation and reconciliation of user information across different DLs. The paper motivates the need for cross-DL personalisation, defining and examining the user model profile together with context interoperability, as well as surveying and discussing existing user model interoperability approaches.

Authors

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Manfred Thaller, Humanities Computer Science, University of Cologne, Germany

Web Links & Resources

Adaptive Multimedia Retrieval: http://amr.dke-research.de/amr2010/
Article by User Working Group (authors as previously cited) 'User-Centric Perspective on Digital Library Interoperability', Information Technology Section *Newsletter July 2010* of the International Federation of Library Associations and Institutions (IFLA)
http://www.ifla.org/files/information-technology/IFLA-10-Jul-ITSv3.pdf
Tech Wiki of the DL.org Working Groups:
https://workinggroups.wiki.dlorg.eu/index.php/Main_Page

14th European Conference on Digital Libraries (ECDL2010),
6-10 September 2010, Glasgow, Scotland, UK
2nd DL Workshop on Making Digital Libraries Interoperable: Challenges & Approaches

The central theme of this Workshop is Digital Library Interoperability, a multi-layered and context-specific concept, which encompasses different levels along a multidimensional spectrum ranging from organisational to technological aspects. The Workshop addresses this challenging area from several perspectives: content, user, functionality, policy, quality, and architecture. Contributions, based on a Call for Papers, will focus on relevant Digital Library interoperability aspects from conceptualisation at a high organisational level to instantiation at process level, as well as modelling techniques for representing and enabling interoperability between heterogeneous digital library mediation approaches, methods, and systems. The Workshop, which targets between 40 and 50 participants from the Digital Library research and application communities, as well developers from scientific communities and Library professionals and decision-makers, will thus move beyond addressing the interoperability challenge at content or service level to encompass multiple dimensions that need addressing.

Web Link
http://www.dlorg.eu/index.php/dl-org-events/2nd-dl-org-workshop
ECDL2010: http://www.ecdl2010.org/

DL.org Networking Session at ICT2010, Wednesday 29 September 2010, Brussels, Belgium

Global Information Infrastructures for Science & Cultural Heritage: The Interoperability Challenge

ICT2010 is Europe's most visible forum for research and innovation in the Information and Communication Technologies (ICT) arena, bringing together researchers, business people, investors and high-policy makers in the field of digital innovation from across Europe and globally. The policy priorities of ICT2010 are the Digital Agenda and the European Commission's next financial programme of EU funding for research and innovation.

The Networking Session on *Global Information Infrastructures* is co-ordinated by DL.org and co-hosted with two other European projects: DC-Net (Digital Cultural Heritage Network) and GRDI2020 (Towards a Global Research Data Infrastructure of the Future), both funded by the GÉANT and e-Infrastructures Unit of the European Commission, with the aim of exploring interoperability challenges from multiple perspectives.

The Session, from 9:00-10:30 on Wednesday 29 September, offers an important forum for developers, programme owners, researchers and implementers across diverse application domains, scientific data infrastructures, cultural heritage infrastructures and Digital Libraries to share knowledge and formulate guidelines for interoperability. The Session will spotlight new research perspectives for Digital Library and information infrastructure interoperability emerging from the findings of the host projects, as well as policy & investment priorities with an eye to interoperability and Europe's Digital Agenda, serving as a springboard for fruitful interactive discussions with the audience.

Web Links

DL.org website: http://www.dlorg.eu/index.php/dl-org-events/dl-org-ict2010

Expressions of Interest can be posted on the dedicated ICT2010 Networking site by first creating a User Profile: http://ec.europa.eu/information_society/events/cf/ict2010/item-display.cfm?id=3479

DL.org Autumn School in Athens, 3-8 October 2010

Digital Libraries & Digital Repositories: Modelling, Best Practices & Interoperability

Hosted by the Department of Informatics and Telecommunications, University of Athens (NKUA), the DL.org Autumn School in Athens next October is a premier educational and training event in the Digital Library landscape.

Our research-oriented Autumn School is designed for librarians and librarian decision-makers, information scientists, computer scientists, PhD students, early career researchers and young professionals working in the Digital Library (DL) and Digital Repository (DR) arena. The School is focuses on modelling issues, practical solutions and best practices on interoperability. Participants will come away with a deeper understanding of the six core concepts characterising DLs and DRs: content, functionality, user, policy, quality and architecture, first captured in the DELOS Digital Library Manifesto and of how to address interoperability challenges along a multi-dimensional spectrum. The School is led by internationally established lecturers with hands-on sessions and ample opportunities to interact with lecturers and peers alike, as well as to experience the city of Athens.

The **Autumn School Fees** cover pre-course reader, course material and tuition, Autumn School Welcome Reception, Social Dinner, and morning and afternoon coffee and tea breaks. Discounted hotel rates are available strictly for Autumn School registrants.
Early registration ends: 31 August 2010.
More information: http://www.dlorg.eu/index.php/autumn-school

Social Programme	**Five Bursaries Available**
The Autumn School opens on Sunday 3 October 2010 with an Evening Welcome Reception.	Five DL.org Bursaries are available to PhD students, post-doctoral researchers and young professionals.
The Autumn School Social Evening, including Dinner is on Thursday 7 October.	http://www.dlorg.eu/index.php/autumn-school/tuition-bursaries-available

New DL.org Strategic Alliance for Education & Training

SCIENTIX – a web-based community for science education to ensure access to teaching materials, research results and policy documents for educational & scientific projects.

CIO, Bielefeld University Library; Expert in the DL.org Quality Working Group
Programme Chair of Open Repositories 2010 – The Grand Integration Challenge, July 2010, Madrid

Digital Repositories are being developed in a number of fields, spanning education, research, science and cultural heritage, on national, regional, institutional, lab and personal level. In this evolving landscape, repository platforms are transforming the nature of scholarly communication.

Universities, research laboratories, libraries and commercial organisations are developing innovative repository-based systems that address the entire life-cycle of information, from supporting the creation and management of digital content, to enabling use, re-use and inter-connection of information and ultimately ensuring long-term preservation and archiving. In this interview with Wolfram Horstmann (pictured), Programme Chair of the Open Repositories 2010 conference and an expert serving in on the DL.org Quality Working Group, we explore the issues around integration that were addressed during Open Repositories with reference also to interoperability from the perspective of quality within the context of DL.org.

How would you describe the main aims and focus of Open Repositories 2010?

The Open Repositories conference series, now in its fifth edition, has grown to become one of the most important conference on repositories, particularly in terms of ensuring academics are well placed to offer rich information sources. This year's Open Repositories brought together individuals and organisations engaged in the conception, implementation and management of digital repositories, as well as stakeholder communities to address theoretical, practical and strategic approaches and ensure Digital Repositories offer value-add now and in the years ahead.

The burning issues at this year's conference are summed up as "The Grand Integration Challenge", as repositories become increasingly complex and dispersed, not just linking to Google but to a very broad provider scenario encompassing research publications, research data, bibliographic data and administrative data linked to the world wide web and diverse applications.

The Open Repositories conference series primarily targets the infrastructure community made up of developers and service providers who focus on machine interoperability as well as the end-user community. One trend that has emerged through Open Repositories is an increasing focus on developing repositories that cater to specific academic domains, including customised services meeting specific end-user requirements in fields as diverse as Biology, Chemistry or the Humanities. But while more end-user oriented services are emerging, there is also a great deal of interest in infrastructure development and issues that pertain particularly to developers, researchers, and service providers.

What specific burning issues were addressed?

This year's Call for Papers defined integration as a grand challenge that encompasses diverse facets along a multidimensional spectrum with the aim of shedding light on the most important facets by ensuring effective knowledge exchange on the different trends and perspectives that need addressing to ensure integration in the future. "**Web and repositories**" was one such challenge addressed, where the aim was to define the optimisation of repositories as not every repository is suited to the web. Other issues are concerned with "**knowledge and technology**" and "**wild and curated data**", that is, the tension between what is seen as valuable from a user's perspective and what developers believe is important. In other words, some groups believe well curated content and high quality are key, whereas others believe people should be left to do what they want.

The keynote by David De Roure from the University of Southampton addressed the challenges of "**isolated and linked data**" with special reference to MyExperiment and why and how linked data has been embraced to bring value-add to the services provided.

"**Disciplinary versus institutional systems**" was also explored as an important theme moving forward. Here the contrast is between community-centric approaches and approaches that put Quality of Service (QoS) and long-term access high on the agenda, along with opposing perspectives, such as "**scholars and service providers**" and "**ad-hoc versus long-term access**". Open Repositories 2010 also explored "**ubiquitous and personalised environments**", where we have open environments such as Google in the first instance or a combination of open and restricted access in the second instance, which is particularly important for many types of research data. Finally, the conference looked at emerging trends like "**the cloud and the desktop**". While an increasing number of resources are moved from servers to a cloud, it is also integral to reach the desktops of researchers so building this bridge is important.

Summing up the main conference achievements, how do you see the Open Repositories conference developing in the future?

I see a number of developments taking shape over the next few years. One such development is an increasingly professional approach. This year's edition was the largest to date with 400 attendants from 36 countries. Open Repositories has always been an international effort, but global involvement is likely to grow in the years ahead. From a quality perspective, this year there were 6 times as many paper submissions, totalling 250, with a rejection rate of around 60%, which is an important achievement to take forward. The diversity of topics explored is a new trend that will probably continue. We can expect to see a shift away from open access and institutional perspectives as the main topics towards the world of research data and administrative data, particularly on building high-quality data resources in a landscape of diverse systems. It will be interesting to see how this differentiation is taken forward next year.

Wolfram, you serve as an expert on DL.org's Quality Working Group. Why is interoperability crucial for digital repositories and what is the role of quality?

With regard to repositories, interoperability is a decentralised paradigm that poses the question of how to link very heterogeneous and dispersed resources from all around the world. Interoperability is thus a crucial theme and the ultimate goal we are striving for. The role of quality in DL.org's Working Group is twofold. On the one hand, there is reliability of services.

When building systems and operating on data in a distributed infrastructure, you need to be able to rely on every part. Precision of data is the second challenge. For example, in a major repository service, the Bielefeld Academic Search Engine (www.base-search.net), there are currently 1700 repositories with 25 million records for academic resources harvested on a daily basis. Considerable effort is needed to arrange all the filters for individual repositories to ensure that the end user has an homogeneous experience in working with such diverse sources. Quality must thus be provided in a decentralised manner, which requires standards.

Nicholas Ferguson & Stephanie Parker, Trust-IT Services Ltd

Wolfram Horstmann is CIO Scholarly Information at Bielefeld University, affiliated to the Bielefeld University Library. He is a Biologist by training, has an experimental research background in Computational Neuroscience and received his PhD for work in the Theory of Science. He has been involved in information management developments since 1997, e.g. distributed systems for academic publishing (across science and humanities, DIPP), for complex media in eLearning and electronic textbooks (educational simulations for the neural and cognitive sciences, MONIST) and for generic information management infrastructures (DRIVER: Digital Repository Infrastructure Vision of European Research).

Web link to Interview & PDF Download
http://www.dlorg.eu/index.php/on-line-media-room/interviews/wolfram-horstmann

Interoperability for Digital Repositories: Towards a Quality and Policy Framework – Interoperability Policy, Tuesday 6 July

Giuseppina Vullo, Humanities Advanced Technology & Information Institute (HATII), University of Glasgow and Co-ordinator of the DL.org Quality Working Group, presented the talk entitled *Interoperability for Digital Repositories: Towards a Quality and Policy Framework* to a highly receptive audience during the Interoperability Policy Session at OR2010. Emphasis was placed on core policy and quality aspects affecting digital repositories; the DL.org policy and quality frameworks and real-world cases and surveys on policy and quality interoperability. The talk, which helped pave the way for further interaction with OR2010 attendants during our Birds of a Feather Session, was co-authored by Perla Innocenti, also from the University of Glasgow and Co-ordinator of the Policy Working Group, and Seamus Ross, Dean of the Faculty of Informatics, University of Toronto.

Birds of a Feather 7 July 2010, Wednesday 7 July 2010
New Paths to Interoperability, Best Practices and Modelling Foundations for Digital Repositories

The Birds of a Feather (BoF) session explored interoperability from diverse perspectives spanning content, functionality, user, policy, quality and architecture, highlighting how current investigations are shaping key outputs, from the DL Reference Model to the Cookbook. Insights were shared with participants, who on their part exchanged experiences and future plans, highlighting how the investigations of DL.org are valuable to this end, as summed up on the website.

Web Link: http://www.dlorg.eu/index.php/dl-org-events/dl-org-or2010
http://www.dlorg.eu/index.php/dl-org-events/dl-org-or2010

A number of experts from the DL.org Working Groups are offering valuable insights not only into the wider Digital Library landscape as we move towards new frontiers, as exemplified by the Digital Agenda for Europe (EC, May 210) but also with regard to specific findings and approaches undertaken by the project culminating in outputs like the Reference Model and the Cookbook.

Recent Postings
Antonella De Robbio, University Centre for Libraries of the Library System, University of Padua, Italy, Expert in the Policy Working Group – On the *Digital Agenda for Europe* and On Organisational Interoperability.

Edward Fox, Professor at Virginia Tech & Expert in the Functionality Working Group - On Credible Interoperability Requirements.

Sarantos Kapidakis, Professor at Ionian University & Expert in the Quality Working Group - On Interoperability, Policy & Quality.
Further insights and comments are offered by Perla Innocenti and Giuseppina Vullo, University of Glasgow, who respectively lead the Policy & Quality Working Groups.

Web Links
DL.org Blog: http://www.dlorg.eu/blog/
DL.org outputs: http://www.dlorg.eu/index.php/outcomes
Digital Agenda for Europe (EC, Comm2010): http://ec.europa.eu/information_society/digital-agenda/documents/digital-agenda-communication-en.pdf.