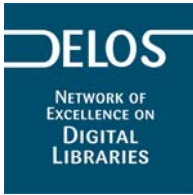


# JOINT DELOS-NSDL SUMMER SCHOOL



Digital Libraries for the Digital Librarian

**Making the Journey  
from Traditional to Digital Libraries**

**Florence, May 28<sup>th</sup> - June 1<sup>st</sup>, 2007**



## Presentation

Digital libraries are organisations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works (Digital Library Federation 2003). A slightly different, but basically equivalent, definition is from the DELOS Network of Excellence: a Digital Library is a (potentially virtual) organization that comprehensively collects, manages, and preserves for the long term rich digital content and offers to its user communities specialized functionality on that content, of measurable quality, and according to prescribed policies.

In essence, it appears that a Digital Library has on one side “the content”, on the other side “the users” and in between the hardware, the software and *the people*, who are responsible to support and manage both sides. Digital Libraries therefore represent the meeting point of a large number of technical areas within the field of informatics (e.g. data management, information retrieval, the web, image processing, artificial intelligence, human-computer interaction, etc.) and several other disciplines and fields beyond informatics, such as library sciences, museum sciences, archives, sociology, psychology, knowledge management etc.

Despite the relatively young age of Digital Libraries (they first appeared as a concept in the early 1990s and grew up to become a discipline in its own right in the subsequent years) the last years have seen an increasing introduction of digital resources in libraries, museums and archives. In a relatively short period of time, digital libraries have become a global phenomenon, with considerable funds spent in research, and even more funds spent on practical applications, in building a variety of digital library collections, components and services. A vision that has been repeatedly presented, advocates that DL “should enable any citizen to access all human knowledge anytime and anywhere, in a friendly, multi-modal, efficient, and effective way, by overcoming barriers of distance, language, and culture, and by using multiple Internet-connected devices”.

DELOS is a Network of Excellence on Digital Libraries partially funded by the European Commission in the frame of the Information Society Technologies Programme. It is conducting a joint program of activities aimed at integrating and coordinating the ongoing research efforts of the major European teams working in Digital Library-related areas. Its main objective and goal is to develop the next generation of Digital Library technologies, by defining unifying and comprehensive theories and frameworks for the life-cycle of Digital Library information, and by building prototypes of interoperable multimodal/multilingual and integrated content management services.

The US National Science Digital Library (NSDL) was established in 2000 by the National Science Foundation as an online library, which directs users to exemplary resources for science, technology, engineering, and mathematics (STEM) education and research. NSDL provides an organized point

of access to STEM content that is aggregated from a variety of other digital libraries, NSF-funded projects, and NSDL-reviewed web sites. NSDL also provides access to services and tools that enhance the use of this content in a variety of contexts. NSDL is designed primarily for educators (from kindergarten to college), but anyone can access NSDL.org and search the library at no cost. Access to most of the resources discovered through NSDL is free.

DELOS and NSDL have joined forces in organizing a Summer School that intends to address some of the common concerns of cultural heritage institutions (such as libraries, archival institutions and museums) as they work together (or should work in the future) with information providers, publishers, publications suppliers to tackle the challenges and opportunities of the digital environment for the knowledge society. The digital medium is radically new for libraries, archives, museums and other information providers and they should undertake a thorough examination of roles and practices in order to address the challenges that this implies. Although there is a continuity of purpose and value of the traditional organisation within these cultural heritage and information institutions, there exists alongside the need of a fundamental re-examination of roles and practices. The main aim of the school is to provide information professionals who intend to take leadership and responsibilities in the complex world of digital libraries with the knowledge of the technologies and the organizational issues involved in the transition from a traditional organization to a Digital Library, illustrating criteria and methods that exploit the strengths of digital libraries in a socio-economic and interdisciplinary manner.

## **School Program**

The transformation from traditional libraries to digital libraries is a journey. As with any journey worth taking, one must consider the starting point, the tools and services one might need along the way and an expectation of what one might have accomplished at points along the way. The school will try to condense this journey in one week, exploring the technologies, management issues, and user/usage implications inherent in this transformation from traditional to digital libraries.

The school will start from the solid foundation of traditional libraries and learn how current and emerging digital library science is changing the way information is acquired, described, archived, accessed, contextualized, annotated, disseminated, and kept effective through evaluation. Three perspectives will accompany us as we travel: the library user, the technology, tools and services to support the use of digital libraries, and the treatment of old and new issues of management and policymaking that are emerging in the digital library world.

At the end of the school the attendees are expected to have acquired an understanding of the impact of digital environment on the role of the information professional in the knowledge society. They should have acquired a coherent understanding of the issues related to the deployment and management of digital resources in the ALM domain (Archives, Libraries and Museums), and a good understanding of the technologies underlying them. A special project of Digital Library will be realized by work groups of the participants, applying theories and skills learned during the school.

This one-week intensive school will consist of ten half-day sessions that will include lectures, seminars, practical demonstrations, group work and “field trips” to cultural institutions. The morning sessions will usually begin at 9:00 and end at 13:00, with a coffee break during the morning. The afternoon sessions will usually begin at 14:30 and end at 18:00, with a coffee break during the afternoon. Distinguished lecturers from Europe and the United States will be addressing the following topics.

*Introduction to Digital Libraries* (To be defined; Kaye Howe, NSDL)

This introductory session describes the journey underway from the world of traditional libraries and their support structures to the digital world where new technologies enable the development of

innovative perspectives and facilitation of exciting connections. It will describe how current and emerging digital library technologies are changing the way information is acquired, described, archived, accessed, contextualized, annotated, disseminated, and kept effective through evaluation. The session will also touch on issues of project management in implementing the transition from traditional to digital libraries, including economical aspects and cooperation among cultural institutions.

*Digitizing Information* (Pat Dixon, Northumbria University)

This session will explore the issues related to the digitization of materials and objects, in order to overcome limitations imposed by time, locality, fragility, and ownership. Born digital materials and digital surrogates created through digitization present significant issues of long-term preservation, rights administration and content distribution.

*Digital Collections* (Laura Campbell, Library of Congress; Ragnar Nordlie, Oslo University College)

This session will describe the transformation in typical library activities from a traditional world to a digital world. Digital collections build on the strengths of traditional libraries in terms of collection development strategies, describing collection scope and the need to manage intellectual property. However, the digital nature of digital collections causes some unique issues in terms of granularity, versioning, maintenance, quality assurance and contextualization.

*Organizing the Digital Library* (Donatella Castelli, ISTI-CNR; Dean Krafft, Cornell University)

This session will provide an introduction to the basic architectures, models and protocols used in digital library systems and inter-library operability protocols and techniques. Examples will be drawn from a variety of EU and US libraries, to show the basic features of Digital Library Management Systems, such as support for storage of digital content and metadata, versioning, access control and authorization, content management, semi-automatic classification, etc. The session will also cover broader service architectures and interoperating applications for digital libraries, including issues of metadata aggregation, supporting multiple portals and content creation applications within a service framework, and some of the issues in allowing users to directly add to the library content and descriptive information, such as folksonomic tags, annotations, organizational structures, and relationships to other resources.

*Describing Information* (Paul Weston, University of Pavia)

This session will look at the constant library challenge of describing resources, but will consider how a digital world impacts such descriptions. The digitizing of real objects allows real objects to be presented and organized in new ways (different groupings, different time periods). Similarly, in a world where an object is born or becomes digital, the challenge is determining the extent to which traditional descriptive information is useful, and what might usefully replace or augment it. Both cases raise the need to describe the objects in new ways that go beyond standard existing library formats. The session will also briefly touch also upon more advanced topics such as semantic interoperability, the Semantic Web, and knowledge extraction and representation.

*Distributed Services and Identity Management* (David Millman, Columbia University)

Recent technologies to manage identities across distributed services have an important impact on service planning and architecture. When several distributed applications share identity information they can create an integrated system that uses the best features of each, creates a seamless user experience, and in which new services become possible. Such integrated systems can also offer valuable evaluation metrics. And they raise new policy and privacy questions. Digital library planners should consider more than their own new web site, their repository, or their particular service. They should, from the start, consider the possibilities of collaboration and integration with other projects and services. In this way, each project can focus on its own principal strengths and all will benefit from the resulting synergies. This session will report on current federated identity efforts in the field, on the NSDL federated identity management architecture in particular, and how

that experience is informing the design of participating services, collection of evaluation data, and policy discussions.

*Accessing the Repository* (Carlo Meghini, ISTI-CNR)

This section will look at the field of Information Retrieval and will describe technologies and approaches used to support information indexing, query execution and result presentation. Examples will be drawn from EU and US libraries, with specific discussion of indexing models, both for traditional and non-traditional objects (e.g. pictures, 3D objects, videos) and advanced techniques for searching and browsing.

*Re-thinking the Role of Repositories* (Sandy Payette, Cornell University)

Traditionally we think of repositories in digital libraries as services that store and provide access to content. Over the past several years we have seen the proliferation of institutional repositories that conform to this basic storage model, based on architectures such as DSpace, Fedora, Greenstone and ePrints. However, the web has increasingly evolved into a dynamic, collaborative space populated by blogs, wikis, and other forms of dynamic information. In response, we must reframe the role of repositories and their context within a broader service-oriented architecture that enables integration of traditional text-based context, data, and computational services. This session will review the traditional role of repositories and articulate their new expanded role. It will use examples of applications in the institutional repository and developing world of eScholarship.

*Making the Library work for the User* (Vittore Casarosa, ISTI-CNR; Pat Dixon, Northumbria University)

This session will explore how a digital library can be not just a source of information, but can become a tool for study, research, work and collaboration in a multilingual environment. It will look at examples of tools and services for personalizing, customizing, inferring information and sharing information, to satisfy the needs expressed by a person (student, teacher, librarian), by industry, by general public, or by an entity (other digital library or digital service). The session will include also tools and techniques for examining usability, issues surrounding metrics, and case studies examining effort to gauge impact on users of various types.

*Evaluation of Digital Libraries* (Anna Maria Tammaro, University of Parma; Mary Marlinio, Digital Learning Science)

The session on Evaluation will provide participants with a methodological framework with which to consider user needs, expectations and perceptions, and further develop their critical ability to evaluate service quality and plan digital library programmes.

*Scholarly Communication in the 21st Century* (Carl Lagoze, Cornell University)

The nature of scholarship in all disciplines is changing. Enabled by increasingly powerful computers, high-speed networks, and peta-scale storage it is becoming increasingly dynamic, collaborative, data-centric, and process oriented. The artifacts of scholarship are increasingly complex combining text, images, video, data, and computational simulations. To date we have seen a number of responses to these changes including institutional and disciplinary repositories, the "Open access" movement, and protocols such as OAI-PMH that allow federation of content across the Internet. Yet these efforts so far represent changes in form rather than nature. We now have the technologies that make it possible to create a scholarly communication system that closely resembles, and is intertwined with, the scholarly endeavor itself, rather than being an afterthought or annex. This session will look at this changing context and the opportunities it affords. It will begin by reviewing new scholarly communication mechanisms that exist now, including arXiv, PLOS, and institutional repositories. It will then describe state-of-the art developments including the eSciDoc project at the Max Planck Society, the DART project in Australia, and the OAI Object Reuse and Exchange initiative.

*Final Session: the (near) Future*

In this final session each work group into which the participants had been divided will present a “project” outlining their ideal Digital Library of the future, based on the concepts acquired during the school.

### *Field Trips*

The school programme includes also a visit to two cultural institutions in Florence with significant digital collections, where the school participants will have the opportunity to experiment with those digital libraries and to listen to the experience of those institutions in setting them up.

### *Special Events*

The school has also organized three Special Events:

- Sunday, May 27th / 18.00 - **Welcome Cocktail**
- Wednesday, May 30th / 20.00 - **Conference Dinner**
- Saturday, June 2nd / 9.00 - **Guided tour of Florence**

### **Pre requisites**

Participants are expected to have had some previous exposure to the issues related to digital material and to making it available on line. A basic understanding of the Information Technology issues underlying Digital Libraries would also be useful, but no deep technical knowledge of those topics is required.

Some of the sessions will include the use of PC for demos or practical exercises. Participants are invited to bring if possible their own PC, as the school cannot guarantee the availability of a PC for each school participant.

### **Location and dates**

Settignano, Florence, Italy, May 28<sup>th</sup>-June 1<sup>st</sup>, 2007.



### **School Chairs**

Mary Marlino- Digital Learning Sciences, USA

Kaye Howe – NSDL, USA

Anna Maria Tamaro – University of Parma, Italy and DILL International Master

Vittore Casarosa – ISTI-CNR, Italy

## School Secretariat

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## Registration

The registration fees are as follows:

Early registration (before 1 May 2007)	500€
Regular registration (after 1 May 2007)	600€

The registration fee includes: <ul style="list-style-type: none"><li>• lectures</li><li>• lunches and coffee breaks</li><li>• social dinner</li></ul>	The registration fee does not include: <ul style="list-style-type: none"><li>• accommodation</li><li>• transport</li><li>• dinners (except for the social dinner)</li></ul>
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Registration can be done at the school web site (<http://www.delos.info/school-journey>) or by sending an email to the school secretariat clearly indicating name, institution, country and email address.

For university students, PhD students and young researchers supported only by a research grant, a limited number of partial bursaries is available, supported by DELOS and NSDL. A letter of recommendation from the University or the research organization is required. The number of bursaries is limited and will be granted under a first come, first served policy. To apply for the grant, please send a request to the school secretariat, explaining your status and accompanied by a letter of recommendations.

## Registration Payment

Your registration will not become final until we receive payment. Cancellations received before April 29th, 2007 will be refunded in full. Cancellations received after April 29th, 2007 but before May 20th, 2007 will incur a charge of 25% to cover administration costs. Refunds for cancellations after May 20th, 2007 cannot normally be made. Substitutions of participants may be made at any time up to the start of the school. Payment can be made by credit card, bank transfer or money order, banker's draft or international cheque.

### *Credit Card*

Payment by credit card can be done by printing and filling-in the credit card payment form, and sending it via fax to the school secretariat (Francesca Borri, fax +39 050 315 3464). Please note that we can accept only VISA and Mastercard credit cards for payment of the registration fee. The credit card payment form can be found at the end of this Call for Participation and can also be downloaded from the school web site (<http://www.delos.info/school-journey>).

### *Bank Transfer*

Payment by bank transfer can be done with the following information.

- *Bank:* Banco Popolare di Verona e Novara, Filiale di Pisa 1, Via San Francesco 54, 56127 Pisa, Italy
- *International bank code (IBAN):* IT 26 D 05188 14002 000000013761
- *SWIFT code:* VRBPIT2V676
- *Account holder:* Ettore Ricciardi – Treasurer
- *Reference:* Make sure to specify the name of the person being registered as well as the name of the school: "ISDL2007 - Journey".

For your convenience, a bank transfer form (to be printed, filled-in and brought to your bank) can be found at the end of this Call for Participation and can also be downloaded from the school web site (<http://www.delos.info/school-journey>).

### **Money Order**

The money order, banker's draft or international cheque should be made payable to "Ettore Ricciardi - Treasurer" and sent, along with a copy of your registration information, to the school secretariat.

### **Venue and Accommodation**

The venue for the school is Villa Morghen (<http://www.villamorghen.com/>), a combination of villa and monastery, whose history goes back to the 15th century. Villa Morghen is set in Settignano, on the hills overlooking Florence, 5Km from the city center. Those who select accommodation onsite will find that the accommodation is pleasant and the food rich in local flavour.

Villa Morghen offers accommodation in completely restored rooms with bath. The rates available for the school participants are as follows, including breakfast. It is also possible to have dinner at Villa Morghen with a supplement of 20 €per day.

Type A	100 EURO per person per night
Type B	70 EURO per person per night
Type C	40 EURO per person per night

Type A is a double room for single use, with private bath

Type B is a shared double room, with private bath

Type C is a shared double room, with bath shared with another double room

Booking for accommodation can be done by printing and filling-in the accommodation form, and sending it via fax to the school secretariat (Francesca Borri, fax +39 050 315 3464). The registration form can be found at the end of this Call for Participation and can also be downloaded from the school web site (<http://www.delos.info/school-journey>). We regret that for those choosing not to stay at Villa Morghen the school organization can offer only very limited assistance for hotel reservation.

On the web site of Villa Morghen there are detailed instructions on how to get there. On Sunday May 27th and on Saturday June 2nd the school can organize transportation from/to Florence airport and Villa Morghen, and from/to the central railway station (Santa Maria Novella) and Villa Morghen. Please let the school secretariat know your travel plans and we will try to accommodate your requests.

For additional information please visit the school web site (<http://www.delos.info/school-journey>) or send an email to the school secretariat ([francesca.borri@isti.cnr.it](mailto:francesca.borri@isti.cnr.it)).