

# Information Technology Section Newsletter

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## Editorial

Once again we have an interesting issue of the IFLA Information technology section newsletter. The year just past has seen a continued momentum in the adoption of open source and the evolution of web services in libraries. This issue includes a review of the KohaConn 2010 conference in New Zealand... **Continued on Page 5**

## From the Chair

Reinhard Altenhoener

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Dear colleagues,

The next IFLA World congress in Puerto Rico is coming soon and we are just in between preparations. As you can find in this issue of our newsletter we are involved in different activities: before the congress starts a satellite meeting will take place in Atlanta, Georgia (USA) driven by the *Library Buildings and Equipment Section* and supported by the *Information Technology* section. The meeting theme is "*The effect of technologies on library design: building the 21st century library*". The call for papers is public and is cited in this issue (p. 16).

Other activities are related to the topic digital preservation in a different way: together with the *Education and Training Section* we will address the topic "*Education for digital curation*" and – together with a bunch of other sections we will have the opportunity to discuss the challenge of the "e-Legal Deposit: from legislation to implementation; from ingest to access". The calls are internationally distributed and cited in this issue, feel

cordially invited to offer a paper (p. 16)!

Aside from the programme preparations for Puerto Rico, our section is visible in the area of Special Interest Groups and we now have – closing one group founded earlier (the library 2.0-group) – two of them confirmed by the IFLA governing bodies: 1. *Semantic Web Special Interest Group (SWSIG)* and 2. *Special Interest Group for Radio Frequency Identification - Technology in libraries (SIG RFID)*. Both of them offer a platform for exchange, participation and communication focused on dedicated topics and less amount of work on administrative things. And there will be opportunities for action – both groups will have sessions in the official congress programme (p. 2).



I would be happy if you feel able to follow our action lines. If you have any questions, feel free to ask me or some of my colleagues from the standing committee of Information Technology Section, listed at the end of this newsletter.

The *Information Technology Section Newsletter* is published twice a year for free distribution. It serves to inform the ITS members of the Section's activities, IFLA updates and events related to IT & libraries.

Articles and news submissions are welcome. And should be sent to the editor Edmund Balnaves ([ejb@prosentient.com.au](mailto:ejb@prosentient.com.au)). To receive this Newsletter send your email to the ITS Information Co-ordinator.

# 2011 Conference

## Libraries beyond libraries: Integration, Innovation and Information for all



**World Library and Information Congress - 77th IFLA General Conference and Council**

<http://conference.ifla.org/ifla77>

The World Library and Information Congress 2011, 77th IFLA General Conference and Assembly, will take place at the [Puerto Rico Convention Center](#), in San Juan, Puerto Rico.

Final Announcement in PDF: [English](#) [Español](#) [العربية](#)

# 2010 Conference Wrap-up

The IT Section had another very productive and intense engagement at the IFLA 2010 World Congress.

The Section meetings at the beginning and end of the conference further progressed the strategic plan of the section. The following is a brief summary of the minutes of the IT Section meetings.

- (1) The four working groups reported on their activities: Semantic Web Working Group, Open Source for libraries, Mobile Computing and Preservation.
- (2) 2011 meetings will include voting on new office holders in the section: the Chair, Treasurer, Secretary and Information Officer. Members were encouraged to consider participating in one of these roles
- (3) EiflNet/FOSS reported on their activities
- (4) Cooperation with the Bill & Melinda Gates
- (5) IT-SIG—Libraries 2.0—to be wrapped up—it has achieved its goal

- (6) Gothenburg activities: Open Access and the changing role of libraries; Global learning systems; ITS & FAIFE joint session; Finally, two sessions on Libraries and the Semantic web, together with the Cataloguing, Classification and Indexing with Knowledge management Sections and later, together with ICADS a session on Development of systems for long-term storage and preservation of library collections;
- (7) Discussion on collaboration with IIPC on a common approach to web archiving
- (8) Plans for Puerto Rico
- (9) Plans for a satellite meeting on Semantic Web for WLIC 2012, Helsinki Finland

FULL MINUTES ARE AVAILABLE AT:

<http://www.ifla.org/en/it/minutes>

## About the Information Technology Section

The Information Technology Section (ITS) serves to promote and advance the application of information technologies (IT) to library and information services in all societies, through activities related to standards, education and training, research, and the marketplace.

At present, the IT Section has 24 standing committee members from 23 different countries. There are ballots for elections every two years, as members complete their terms of four years. See the complete list of SC member at the end of this newsletter.

The IT Section is the second biggest section in IFLA with over 370 members from 90 countries and all types of libraries. We are strongly involved with the activities of other IFLA sections. If you would like to join our section, please contact **IFLA Headquarters** or consult the IFLA membership information at: <http://www.ifla.org/en/membership>.

Visit our website at

[www.ifla.org/en/it](http://www.ifla.org/en/it)

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## Country Focus

## New Zealand

### Koha Conn 2010

KohaConn 2010 marks the 10 year anniversary of the first implementation of the KOHA open source Library Management System. The KohaConn conference was held in New Zealand in Auckland. New Zealand was the birthplace of Koha and has been a key heartland for the open source community supporting this system.

The conference was divided into two segments, the first part (days 1-3) was aimed at Koha users, librarians, and Koha developers. While the second part "Hackfest" was aimed at Koha developers.

There has been a significant uptake of Koha in developing countries, and we were presented with the experiences of Koha users from Nigeria, Malaysia, and Pakistan. A common issue highlighted by these speakers was that proprietary library management software was too expensive to be implemented by the majority of libraries in these regions, and there were few alternatives on offer.

Before their adoption of Koha in Pakistan, many of these libraries were using a simple application that was developed locally to manage their catalogues. This software was freely available to libraries in Pakistan, although it was far from being a true ILS. The increasing popularity of Koha as an open source LMS led to the implementation of Koha version 2 in many institutions in Pakistan and Malaysia.

Being an open source application, there was a strong focus on the "Koha community" and giving back and contributing to the community. Nicole Engard spoke about involvement in the Koha community and gave an overview on how you can participate in the Koha community to further the betterment of the product.

MJ Ray gave an interesting presentation on the cooperative structure and its history. While his presentation wasn't focused on Koha it related to the values of the open source community, and demonstrated how a cooperative structure is aimed at working for the benefit of the community and its members in a similar way to the open source community.

The interesting concept of "anti-features" was addressed by François Marier and he spoke about

how proprietary vendors were using methods to block certain features from users unless they pay more, but the product they are offering is essentially the same. Proprietary vendors limit your features based on how much you are paying, whereas open source software aims to increase the included features through community involvement and development.

François also covered the different open source licenses, and the benefits of each.

Paul Poulain became involved with Koha in 2002 and has worked with the development team and acted as release manager on two occasions. Paul gave an overview of the history of Koha and the various people involved in the development of Koha over the years.

Mark Osbourne is a deputy principal at a senior high school in Auckland and he shared his experiences with Koha, and how implementing Koha allowed him to have a fully functional ILS at a price that was within his school budget. Mark's implementation has led to further features being developed to cater for his needs, and these features have been fed back into Koha for future releases.

KohaConn exemplified the success of open source in delivering integrated library services to a diverse spectrum of libraries around the world.

Mark Chehade  
Molten Media

*Mark Chehade is active in RFID systems and in the development of standalone checkout systems integrating with Koha.*



## IFLA bibliographic standards and the Semantic Web

Gordon Dunsire  
December 2010

This article is an update to *Initiatives to make standard library metadata models and structures available to the Semantic Web* (available at <http://www.ifla.org/files/hq/papers/ifla76/149-dunsire-en.pdf>), co-authored with Mirna Willer and presented at the Information Technology, Cataloguing, Classification and Indexing with Knowledge Management session during IFLA 2010.

The options and requirements report by the IFLA Namespaces Task Group was considered by IFLA's Professional Committee (PC) during its April/May 2010 teleconference meeting and given a favourable response. The first recommendation, to set up a group to help coordinate technical issues associated with IFLA standards and liaise with other organizations and initiatives, was approved for implementation. The IFLA Namespaces Technical Group will carry out further work on the other recommendations, and will probably report to the new core activity on bibliographic standards also approved by the PC. As it may take some time to implement the core activity while development of the IFLA namespaces continues, the Chair of the PC has asked the Task Group to fill the gap until a formal Technical Group is established.

It is likely that the Technical Group will liaise with the Semantic web special interest group (SWSIG) proposed by the Information Technology Section.

The first namespace was published in November 2010. It is an RDF/SKOS representation of the *Multilingual dictionary of cataloguing* (MulDiCat). Information about MulDiCat, with links to the original version in MS Word and the RDF file, is available at <http://www.ifla.org/en/publications/multilingual-dictionary-of-cataloguing-terms-and-concepts-muldicat>. The namespace base URI for MulDiCat follows the pattern agreed by a small working group of the Namespaces Task Group: <http://iflastandards.info/ns/muldicat>. The IFLA Web & IT Manager has also set up a vocabulary-level de-referencing service using request header negotiation. Requests for "text/html" content are served with an HTML page which embeds the original Word table. The page also contains internal anchors so that the "hash" part of the

requested URI navigates to the specified term. For example, the URI/URL <http://iflastandards.info/ns/muldicat#Agent> submitted by a normal browser displays the HTML page at the entry for the English term "Agent". Conversely, a request for "application/rdf+xml" content is served the complete RDF/XML file.

The web manager has also implemented automatic forwarding of the .com, .net, and .org domains of "iflastandards" to the .info domain. For example, <http://iflastandards.org/ns/muldicat#Agent> also gets the HTML or RDF file (depending on the request header). There is also a linked list of specific namespaces from the <http://iflastandards.info/ns/> directory.

The FRBR Review Group (<http://www.ifla.org/en/about-the-frbr-review-group>) approved the representations of the entity-relationship model of *Functional requirements for bibliographic records* (FRBR) in Resource description framework (RDF) in October 2010; the basic classes and properties with uniform resource identifiers (URIs), labels, definitions, and scope notes are available in the Open Metadata Registry (previously the NSDL Metadata Registry) at <http://metadatarregistry.org/schema/show/id/5.html>. Ontological constraints on the classes and properties, such as disjointness, have been represented using Web ontology language (OWL) and will be published early in 2011. The Review Group is actively discussing the draft RDF representations of *Functional requirements for authority data* (FRAD) (at <http://metadatarregistry.org/schema/show/id/24.html>) and *Functional requirements for subject authority data* (FRSAD) (at <http://metadatarregistry.org/schema/show/id/26.html>).

The 16th FRBR-CIDOC CRM Harmonization meeting will take place in Nuremberg, Germany on 20-22 December 2010. The main topic on the agenda is the harmonization of FRAD and FRSAD with the *CIDOC Conceptual Reference Model* (CRM), which also has an RDF representation. More information is available at [http://www.cidoc-crm.org/agentas/22nd\\_sig\\_agenda+16th\\_frbr\\_crm.htm](http://www.cidoc-crm.org/agentas/22nd_sig_agenda+16th_frbr_crm.htm).

Draft RDF representations of the elements of the

consolidated edition of *International standard bibliographic description* (ISBD) (<http://www.ifla.org/en/publications/international-standard-bibliographic-description>) have been developed (at <http://metadataregistry.org/schema/show/id/25.html>). ISBD uses controlled vocabularies for its Content form and media type area. These have been represented in RDF/SKOS in the Open Metadata Registry; see the list at <http://metadataregistry.org/vocabulary/list.html>. The ISBD/XML Study Group is also developing a Dublin Core application profile (<http://dublincore.org/documents/profile-guidelines/index.shtml>) to model element sequence, mandatory status, and repeatability status, with links to syntax encoding schemes (SES) for aggregated or compound elements, and the vocabulary encoding schemes (VES) of the controlled vocabularies.

Further information about this work can be found in *ISBD and the semantic web* (<http://leo.cilea.it/index.php/jlis/article/download/4536/4408>), a paper in volume 1 number 2 of JLIS.it

The Functional requirements models and ISBD intend to use MulDiCat as a source of translations of the English labels, definitions, and scope notes in the RDF representations. The numerous translations of the original texts of FRBR, FRAD, FRSAD, and ISBD will also be used as sources. The RDF representations use so-called opaque URIs which are difficult to remember by humans; e.g. the URI for the ISBD content form term with the English label "dataset" is <http://iflastandards.info/ns/isbd/terms/contentform/T1001>. The FRBR and ISBD review groups have taken this approach to avoid favouring the English language in a multilingual environment.

Several members of IFLA sections are also members of the W3C Library Linked Data Incubator Group (LLDXG); there was an informal meeting at IFLA 2010. As a result, IFLA standards and their technical development have been well-represented in the discussions of the group; see the wiki at <http://www.w3.org/2005/Incubator/llid/wiki/> for further information. In particular, the page at [http://www.w3.org/2005/Incubator/llid/wiki/Library\\_standards\\_and\\_linked\\_data](http://www.w3.org/2005/Incubator/llid/wiki/Library_standards_and_linked_data) acts as a reference point for information on library standards and their relationship to linked data.

Gordon Dunsire  
December 2010

*Gordon Dunsire is a freelance consultant. He is a member of the Classification and Indexing Section, the FRBR Review Group, and the ISBD/XML Study Group, and chairs the Namespaces Task Group, all within IFLA. He is also a member of the W3C Library Linked Data Incubator Group.*



## Editorial (continued from page 1)

The Semantic Web and the transition in bibliographic standards are also featured in this issue with Gordon Dunsire's update. If you find the acronyms in this article a challenge I recommend the book *Introducing RDA* reviewed in this newsletter. Changes to cataloguing standards will have a profound impact on our library technology. These changes establish the discipline required to produce metadata of the quality required for the Semantic Web context. The adoption of RDA (Resource Description and Access) has the potential to position the library as a trusted and reliable metadata hub for the organisation.

The growth in digital library repository accelerates the importance of the emerging frameworks for discovery. In this context the need to hide the complexity of the inter-relationships between source systems through single-sign-on approaches is also of growing importance. Also important are the emerging disciplines to evaluate and measure performance of these increasingly important assets. Somayyeh Nadi Ravandi and Mohsen Haji Zeinolabedini in this context provide an interesting article on *Parameters for Designing and Evaluating of Digital Libraries*.

I trust you will all enjoy this issue of the Section Newsletter. Contributions with your reports, papers and news are very welcome and should be sent to the editor [ejb@prosentient.com.au](mailto:ejb@prosentient.com.au).

Dr Edmund Balnaves  
Prosentient Systems  
2010



## Parameters for Designing and Evaluating of Digital Libraries

Somayyeh Nadi Ravandi

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Medical Sciences, Iran*

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**Introduction:** The digital library always has been a mysterious concept and terms like 'electronic library', 'virtual library', 'library without walls', 'hybrid library' and 'digital library' have applied often together or in place of one another for conveying a library concept independent of place and time and with resources that are usable from far. Studies have shown that there does not exist universal standards and definitions for 'digital library' that all people have been agreed on. Although Digital Library Federation (DLF) have a definition that is an accepted and frequently cited definition, the different definitions in this field indicate lack of agreement between specialists of this area. This research is undertaken because of the lack of perfect and distinct standards for evaluating digital libraries and because of the importance of evaluation of this type of libraries. In this research, the most important parameters for design and evaluation of digital libraries has been investigated and a relative criterion framework have been given.

**Methods:** This study was a descriptive research. First with studying of texts and reviewing of resources about digital libraries and their design and evaluation were recognized a lot of elements in design digital libraries. In other part of research, researchers surveyed six successful digital libraries in the world. Then they analyzed all of the received information and elements and determined basic parameters in design of digital libraries.

**Results:** findings of this research showed that designers should be observed 14 main parameters for designing digital libraries. These Parameters are: Full text recourses, Special Users, Permanent access, Format, Retrieval and search, Acquisition, Infrastructures and Equipments development, Expert staff, Organization, Cooperating capability with other libraries, Services, Printer resources, Standards and Standardization and Copyright observance.

Parameters have different subgroups that involve different areas.

Conclusion: investigations in this research showed that in surveyed textbooks and resources regarding digital libraries there has not yet been any study with this approach to investigation of parameters related to design and evaluation of digital libraries. Findings of this study can be used as criteria of future design and evaluation of digital libraries and improvement of current process in these libraries.

Keyword: Digital libraries, Parameters, Design

### 1. Introduction

Digital libraries were a phenomenon starting in the 1990s. Though the first sparks of creating such an environment was produced in 1945 with the idea "Memex" by Bush, the creating of these libraries in a new form is related to early 1990s. The digital environment for access to the sources through computer networks and communication protocols realized a long-time human wish for access to information beyond time and place. But the digital library with all features and benefits is a vague concept. There is not the global definition of these libraries that everyone has agreed with. Librarians have definitions on the basis of the librarian concepts and also computer experts have give technical and network definitions for it. Although DLF [Digital Library Federation] has a definition for this kind of libraries that is the most cited definition amongst digital libraries definitions. The definition of Digital libraries Federation is:

*"Digital libraries are organizations 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 so that they are readily and economically available for use by a defined community or set of communities." [1] But in continuation of this definition, Federation says: "Of course, the concept of digital library has multiple senses that one might invoke in various contexts." [1]*

On the other hand this definition is related to the early years of creating of digital libraries and subsequently it has not been updated But from the 1990 s with spread adoption of the Web, the concept of digital libraries has

had many changes.

Schwartz' research shows that there are 65 different definitions of digital library. [2] With a more accurate vision we can observed ambiguities and contradictions in these definitions. This claim is based on the text research approach in librarian and information resources, indicates that many and variety definitions of digital library have been presented with different viewpoints Diversity of these definitions is such that we can numerate it a crisis of epistemology. [3]

For such a phenomenon with so many various definitions and even contradictory, different executive projects, trying for presenting of standard and evaluation criteria is a little strange. Because when you cannot present a comprehensive definition of a phenomenon that at least more experts in the field of subject have been consensus, the compilation of evaluation criteria or determination of the best in this area is very difficult. This issue is completely true of the digital libraries. On the other hand in the field of information retrieval the digital library is one of the most important areas, and assessment is very importance. Also many times presenting a report on quality and quantity of functions by the managers and justifying cost-utility of organizations budget and improving the quality of provided services to users and returns to organizations is necessary. The launch of digital libraries also has a lot of costs and for this reason, evaluating of their services is very important. Then, despite of all exiting challenges we should find a way to evaluate of these libraries. One of the ways of assessing is cognition of main involved elements and parameters of in designing a phenomenon.

## 2. Originality

Investigations in ISO, NISO and DLF, as the highest reference in issues regard to digital libraries, shows none of them don't have perfect standard that we can use it for designing and evaluating digital libraries. Principal part of digital library standards in these organizations refers to metadata. May successful digital libraries in world have used from test and error method for their designing. In fact we didn't find a perfect standard that was involved all aspects in a digital library for example acquisition, organization, interoperability, standards and standardization and equipment. But this issue doesn't mean that no effort has been done in this area. For example Namazi dissertation [4], Fuhr's work [5] , a *Framework of Guidance for Building Good Digital Collections* in NISO [6] and etc. But none of these efforts encompass all aspects of digital libraries. The aim of this study was determining of main parameters for designing of digital library that was involved different aspect of DLs. Study findings help to determine criteria for evaluation of digital libraries. In recent years, there have been created numerous digital libraries in Iran (110 cases) and this growing trend still continues and assessment of their functions and services, with regard to spent many costs for their creating, is very important, this study has been done with the aim of determining and presenting of evaluation and design parameters in digital libraries.

## 3. Related work

Namazi introduce 8 main elements and vital parameter in designing of digital libraries. (Namazi 2003) and Sarasevic believe elements such as the purpose, the scope, cover and modernity, form and preserving and digital sources in this case is effective. [4]

Fuhr has introduced the users, digital collections and the use of digital library as main parameters in designing of digital libraries and with presenting of a general view of the important elements in digital libraries designing, is drawing general plan for evaluating of them.[5] However, search in global standard organizations site like ISO [ International Standards Organization], NISO[National Information Standard Organization] and also the digital library federation as the highest authority of issues related to the digital library and other standard organizations shows that in none of these sites are there comprehensive and completed standard with the approach of this research that could used it to determine or to design standard digital libraries. Perhaps can be state the digital libraries that in the world have been introduced as an example of successful digital library, have used the method of trial and error to design and to continue their libraries work. This doesn't means that has been no research in this field. For example in part of the Digital Library Federation standards, the most complete standard is *a Framework of Guidance for Building Good Digital Collections*. NISO site also has reference to this standard. But this framework applies for all digital environments and isn't particular to digital libraries. Other defined standards in this part of federation site are standards and metadata schema in world that are standards about electronic resource organization or standard protocols for standardization of communication aspect of digital libraries.[6] Also the ISO site refers to metadata standards for example Dublin core and METS and MPEG-A that are standards related to digital pictures[7] and NISO site also present Dublin core standards(Z39.85).[8] Also in part of standards of BUBLE LINK has been implied to Dublin core metadata and *\_Framework of Guidance for Building Good Digital Collections* that previously referred to it. This site in part of its standards has a section in the name "*eLib standard Guidelines*" that in this part pointed out metadata, information exchange standards, applicable services and security in digital libraries. [9]

## 4. Methodology

This study was a survival-descriptive study. The research society was 6 successful and standard digital libraries, the one hand, and studied recourses in this investigation in the other hand.

For determining of the main parameters in designing of digital libraries we first studied in the textbooks, resources and researches that have been done in this field, as far as possible. A check list was created with use from this information. Then 8 digital libraries were selected that are successful examples of digital libraries in the world. This sample is same Namazi selected sample [10] and their selection criteria is their

authority in national and international societies and also their geographical scope. In the next investigation was denoted that there is not access possibility to Korea digital library and Oxford digital library. While these two libraries didn't answer to researchers questions and then they were removed from the research community. For study of sample digital libraries, initially was studied their website. In some cases there was no access or there was no possibility of investigation, sending emails, obtained desired information. This information was analyzed and extracted new cases and these cases were added to previous cases. (Result of this investigation has been printed in tables 1, 2). So 14 main parameter groups and their subgroups were defined.

## 5. Results

Study of texts, resources and research in Iran and other countries in field of digital libraries and also investigation of successful digital projects showed that should be considered the 14 main parameters in designing of digital libraries.

The 14 elements include:

1. Full text recourses
2. Special Users
3. Permanent access
  - From the viewpoint of permanent access to resources
  - From the viewpoint of ways and means to access
4. Format
5. Retrieval and search
  - Search capabilities in the digital library
  - Use of standards and standard software to increase search abilities.
6. Acquisition
  - 1.6. Acquisition policy
  - 2.6. Selection of resources using policy
  - 3.6 recourses development
7. Expert staff
  - 1.7. Librarians
  - 2.7. Computers engineering
8. Infrastructures and equipment development
9. Organization
10. Cooperating capability with other libraries
11. Services
12. Print resources
13. Standards and Standardization
14. Copyright

All of them with relevant characteristics in details:

*Full text recourses:* In the many definitions of digital libraries, real intention of digital resources is full text resources. It is obvious that real expectation of library user -either traditional or modern- is access to full text resources. For example Yee point out this issue in presenting of several definitions about digital libraries from different people. In all these definitions, the first option is access to resources that have very high frequency.[11] Then a digital library should provide access to resources and objects, also necessary equipment for processing and also provide presenting of these resources with a way that meet ultimate users purposes.[12]

*Special Users:* The aim of all activities, and efforts and spending of funds in the establishment of libraries is to meet the basic needs of users. [13] Studies show that the users society have a basic role in designing of digital library. Also studying of the policy and goals of sample digital libraries confirm paying attention to this parameter in these libraries. In this field we can point out Asadi [14], Klas [15], Bryan-Kinns [16], Kornig [17] and Cook [18] researches.

*Permanent access:* Permanent and confident access means possibility of using the continual sources without worrying about removing them in the future. In general this can be regarded this parameter from the two points of view: *From the viewpoint of permanent access to resources:* Among anxieties about the use of electronic and internet sources and in general about the existing resources in the web is lack of resistance of resources. Perhaps possible of source using be existed today but later days we cannot access to these source. So possibility of permanent access to resources has great importance. Dillo says about importance of this issue: "*The idea that the scientific record, now recorded and managed mainly in digital form, might be lost to posterity is very alarming. Advancements in science are completely dependent on knowledge gained in the past*" [19] Also Sitts insists that maintenance and permanent access to sources beyond time and place is a success criteria of digital projects [20]. This parameter in Namazi [10] and Hodges [21] researches is one of the basic parameters. In many definitions of digital libraries also "permanent and confident access" is as a common problem. For example in digital library definitions from digital library federation [6] and Borgman [22] and Lynch [23] "Permanent access" to the sources is common point all of them. *From the viewpoint of access ways and means:* A rapid change in computer science and new progresses creates very new facilities in the dynamic environments like Web. The Digital library should have adaptation ability with such rapid changes. The sample digital libraries, all, have a committee of the professional committees to survey the latest technology changes to deal with such issues. Namazi in his research confirms this parameter. [10] Wijngaarden [24] explain in his paper as " Digital Preservation and Permanent Access: The UVC for Images" new means for permanent access to Koninklijke Bibliotheek pictures. Studying sample

digital libraries also showed that they have permanent access tools and are ready for confrontation with technology changes.

**4. Resources Format:** Digital libraries ,with regard to their capabilities, because have possibility of resources giving in different forms such as the text, pictures, maps, film, video and sound, should consider the necessary facilities and equipment for the use of resources in the different forms. Seamens [25] underline to access to resources form kinds. Also Schwartz [2] notifies to this issue in remark of joint traits of digital libraries. Sample investigated digital libraries shows that all of them, with regard to their aims, present different formats and provide necessary equipment for access to resources.

**Retrieval and search:** Every library to be usable then should provide possibility of search and retrieval to sources. In digital libraries, because the nature of physical sources isn't visible, this issue has more importance. Search issue is important from tow overview:

**Search capabilities in the digital library:** Different search tools exist in web. using of Boolean operators, Proximity Searching, Phrase Search, field search, date search and specific search are search capabilities that should be considered with regard to resources type and formats of library and the existing facilities. Subject browsing; metadata and full text search are another search facilities and capabilities in digital libraries.[26] Smith [27]s also With regard to importance of this issue has survey search capabilities in some digital libraries. His survey shows digital libraries use variety ways for increasing of the quantity and quality of search results. Table No.1 shows capabilities of the search in 6 digital libraries. These libraries use 11 different search methods **Use of standards and the standard software's to increase of search abilities:** Sample digital libraries use the standard software's to increase the capabilities of the search.

**Acquisition:** One of the very important pillars in digital libraries is acquisition: Digital libraries also don't exclude from this rule. This element in the library especially digital libraries includes three parts:

**Acquisition policy:** Having a compiled and authentic model in acquisition in a digital library with large costs, has also the extraordinary importance. IFLA [28] introduced the most important reasons for choosing of a resources policy. These reasons are resources selection, basis for the planning future, a way to establish communication and to provide resources for the expansion of inter library cooperation.

**Selection of resources using policy:** The resources selection based on acquisition policy that represents needs of users and also is the main goals. This element is one of the main elements especially in digital libraries with the too much cost. Namazi [10] introduce this element as a basic parameter in digital libraries. In definition of DLF has pointed out "providing of resources" issue [1]. In Borgman's definition from digital libraries, these libraries are structured, collected and organized collections ( Reviewing the acquisition policy of digital

libraries and other information provided in the web site of sample digital libraries confirms attention to this parameters by them.

**Resource development:** Digital library designing should not be for limited resources. [10] Digital libraries are dynamic expanding environments that can increase their resources based on needs and during the time. Collection development isn't an issue only related digital libraries but dynamic and living prerequisite of every kind of library is increasing and spreading of resources in library. The sample digital libraries have increased their resources in a specific time.

**Expert staff:** Digital libraries with regard to the their own nature and the main differences in the choice of sources, organizing, availability of resources and other processes related to the library, need expert employees to offer services and to manage their collections . Using of librarians and computer experts for communicating between of computer and library world is important for creating of digital library. Harter also enforce to this parameter in designing of libraries in survey of digital libraries traits. [29] Digital Library Federation in his definition of digital library referred to this point. [1]

**Infrastructures and equipments development:** Namazi [10] says that is necessary that regard to these parameters in designing of digital libraries in all countries excluding developed countries. Because these structures are standard in developed countries. But in other libraries should be pay attention to it constitutionally.

**Organization:** one of the important pillars of in libraries is resource organization. Cataloging, classification and indexing of resources is for identification, search and better retrieval of resources. Resources organization in digital environments is different with traditional kind. One of introduced important ways is using of metadata. Metadata is for identification, documentation and documents organization in digital libraries. This method is using of the structured information for accessing, managing, moderating and conserving of documents in digital environments. Using of metadata is one of basic parameters in designing of digital libraries especially in their documents organization. Namazi [10] and NISO Framework of Guidance [30] also pointing out using of metadata as one of the most important organization ways of resources in this kind of libraries. Standards section of NISO [8] and ISO[7] , DLF and Bubble link [9], all, imply to metadata standards. Even Library of Congress has special section for digital library standards that in this section have been dissect Mets metadata fully [31]

**Cooperating capability with other libraries and interoperability:** The possibility of using other digital libraries to provide the required resources of user's society is one of the confrontation ways with the sources limitations. For creating possibility of communication between collections and different libraries, should be used communication protocols such as HTTP and standards related to interoperability such as Z39.50.In Namazi [10] research and NISO

framework of guidance has been confirmed this parameter.

**Reference services:** One of important methods for services offering in traditional libraries is reference services. Although researches related to digital libraries tangibly has been not concentrated on this issue but reference services is important part of digital libraries. [31] Presented services in the sample digital libraries have been indicated in table No.2. Singh [31] also implies to advanced means for reference services for creating of digital reference services.

**Printed resources with digital resources:** there is existing disagreement about this parameter. Digital library experts in this case divided into two groups. First group of people believe that is different between digital and virtual library and existing of printed part beside of digital is necessary. these groups daresay" digital libraries are digital face of traditional libraries so have digital collections and resources simultaneously and beside each other [32] But second group believe that isn't different between digital library with virtual and exiting of printed part beside of digital section is necessary with regard to condition qualification, need and aims. The survey of 6 digital libraries showed that all of them have printed section beside of digital section and this show exiting of

printed section is necessary and important in digital libraries.

**Standard and standardization:** Digital libraries should consider standards to create relations among own different collections and browsing and integrated search possibility among the whole collection. Using of necessary standards for relation with collections of out of the library for transfer of information is vital and necessary. Using of metadata standards, standards protocols such as MODS , METS and MADS and Z39.50 are works for standardization of digital libraries. A survey in ISO, NISO and the Digital Library Federation shows that they pay attention to standards related to digital libraries.

**14. Copyright:** Digital libraries have the recorded policy for respect the copyright to use of presented resources in their libraries. Because respecting the copy ight is necessary and needful. The sample digital libraries respect this parameter. There is in metadata standards one element for this issue.

## 6. Conclusion

This article presents a search and survey in site of the organizations responsible for standards such as ISO, NISO and other standard organizations as DLF, library

Table1

Survey of 6 parameters (Full text, Special Users Resources, Permanent Access, Format, search, Acquisition) in 6 digital libraries

Library		American Memory	Making of America	Berkely	California	New Zealand	British Museum
Full text Resources		*	*	*	*	*	*
Special Users		*	*	*	*	*	*
Permanent Access		*	*	*	*	*	*
Format		Book, Map, Audio sources, Music records,	Book, Journal, Pictures Monographs	Book, Pictures, Map, Thesis	Book Pictures Thesis Video-Audio, Map, journal	Book Pictures Multi Media	Book Newspaper Journal
Search and Retrieval	Search Ability	Boolean, Truncation, phrase, Vocabulary Control, Browse ,Field, Multi-media	Boolean, Proximity, simple, advanced, phrase, Relevancy ranking, Browse, Vocabulary Control	Boolean, Truncation	Boolean, Browse, phrase, simple, advanced, Subject	Multimedia, Boolean, phrase, simple, advanced,	Boolean, Browse, phrase, simple, advanced,
	Software	In Query	Not stated	SWISH-E	SRU SRW	mg	Not stated
Acquisition	Policy	*	*	*	*	*	*
	Resource Selection	*	*	*	*	*	*
	Resources development	*	*	*	*	*	*

of congress, British library and other libraries that are involved in digitization issue, also investigation of done many articles and research in the digital library issue specially designing and evaluating of them. Our research showed that there do not exist comprehensive and completed standards with present research overview that we can use as a standards in determining of real and standard digital library. But this statement don't mean that these organizations that are responsible for standards in the word specially DLF as the highest reference related to digital libraries in the word, have done no effort in this issue. In all these organizations there has been done a spread of effort for digital libraries standardization. But present research shows there is no standard in these organizations that include all of aspects of digital libraries fully. All the existing standards cover only parts of the digital library. In section of standards of DLF site[6] and NISO[30] also exists a framework of guidance for building good digital collections that cover 4 general Parameters including "collections" (8 principles), "digital objects" (6 principles), "metadata" (6 principles) and "projects" (6 programs and projects to create and manage of include 6 principle) has explained the principles related to digital

collections[8].This framework has been offered for digitization and good digital collections that isn't only for digital libraries and includes every kind of digital collection. This framework confirms some of finding in this study such as copyright, using of recorded policy, metadata and organization. In standards part in ISO sit [7] exists Dublin core metadata and MPEG-A. And investigation of NISO site [8] also implies to Dublin core metadata. In BUBLE Link [9] also there are different standards related to digital library services that all have too much important to design and evaluate of digital libraries in turn but each of them include special aspect of digital libraries. Namazi [10] research also confirms 8 parameters of 14 parameters in this study. These parameters include " resources Selection, resources format, users society choose, the expansion of the collection, the ability cooperation with other libraries, development and equipping infrastructures, Standard and standardization, permanent and confident access. But Namazi [10] Have technical and general overview in determining of parameters and because he hasn't investigate from library and information aspect, some subgroups have been introduced as a main parameter. For example in his research, resources development

Table 2: Survey of 8 parameters (rest parameters) in 6 digital libraries

Library Parameters	American Memory	Making of America	Berkeley	California	New Zealand	British Museum
Infrastructures and equipment development	*	*	*	*	*	*
Expert Staff	Librarian	*	*	*	*	*
	Computer Experts	*	*	*	*	*
Organization	Marc 21 Mets	Marc 21 Mets	Metadata	Marc, Metadata	Marc, Metadata	Marc, Metadata
Cooperating capability with other libraries	Communication Protocols, Z39.50	Communication Protocols, Z39.50	Communication Protocols, Z39.50	Communication Protocols, Z39.50	Communication Protocols, Z39.50	Communication Protocols, Z39.50
Reference Services	ASK a Librarian, Podcast, Chat with librarian, RSS	FAQ	Current Awareness	Question, Comment FAQ	FAQ	ASK a Librarian RSS current awareness
Printed Resources	*	*	*	*	*	*
Standard and Standardization	*	*	*	*	*	*
Copy Right	*	*	*	*	*	*

has been introduced as main parameter but this study findings show that resources development is subgroup of acquisition with recorded policy and resources selection. Goh [33] and his cooperators also in research for evaluating of open source digital libraries software supplied a checklist including 12 subject categories. In this checklist has been confirmed some of this study findings such as organization (metadata), acquisition, search and retrieval, access, interoperability and cooperation ability with the other libraries. But because we have paid attention to this issue from software aspect, some categories are only related to digital library software for example report and survey of user interface traits. Surveying of other research shows there is no research with the present research approach that directly and generally have been included digital library standards together. But in some researches have been measured parameters such as "search abilities" in the sample digital libraries. In Namazi [10] and Smith [27] research because it's important. For example Nabavi [34] has studies search capabilities in several Iranian and foreign digital libraries and or Smith [27] study has studied search traits in digital libraries. In fact this study shows that has been not study with this area and this overview and we can use from the research findings as criteria for designing digital and improving of present process.

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### Supplement

Digital libraries Email Addresses

American Memory. Available at: <http://memory.loc.gov/ammem/index.html>

Making of America: Available at: <http://quod.lib.umich.edu/m/moagrp/>

Berkeley. Available at: <http://sunsite.berkeley.edu/>

California. Available at: <http://www.cdlib.org/>

New Zealand. Available at:

<http://nzdl.sadl.uleth.ca/cgi-bin/library>

British Library. Available at: <http://www.bl.uk/catalogues/illuminatedmanuscripts/welcome.htm>

### For further information

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Mohsen Haji Zeinolabedini , LIS department , Chamran University of Ahwaz, Yemen Ave, Chamran Highway, first floor of the AREO building - Tehran - Iran. Email: [Zabedini@yahoo.com](mailto:Zabedini@yahoo.com)

Dublin Core: ISO 15836:2009

Metadata Encoding & Transmission Standard: Mets: ISO 25577: 2009

MPEG-A: ISO 2300-3:2007

Metadata Object Description Schema: MODS

Authority Description Schema: MADS

# Book Reviews

**Digital Information: Order or Anarchy?** Edited by Hazel Woodward & Lorraine Estelle. *Digital Information: Order or Anarchy?* ISBN 978-1-85604-680-0. Facet Publishing

Gazing into the crystal ball is always a risky exercise especially when your topic overlaps with information technology. This collection of articles provides a well-grounded discussion of the near future and the developments that are affecting publishing and library collections. Rick Anderson in "Scholarly Communication—the view from the library" provides an interesting and challenging view of the future of libraries—"Research libraries... will change dramatically over the next decade—Much of their role as repositories of standard research collections will have been obliterated..." (p.52-53). Ian Russell in "Scholarly communications—the publishers view" provides a useful scenario analysis of the future of scholarly journal publishing. Mossink & Estelle discuss copyright in "Who owns the content in the digital environment?" - although they tend to confine their discussion to an analysis of the current situation rather than emerging trends. One of the many challenges facing institutions is the fading lines between "commercial" and "non-commercial" institutions that affect fair use rules. Changes in research behaviour are evident in Colin Steele's "E-books and scholarly communication futures" and again the tensions relating to archiving and copyright are evident. Alistair Dunning specifically examines archiving in "Digitizing the past: next steps for public sector digitization". Sustainability is, with archiving, a deep challenge for all stakeholders.

Some themes emerge: the crunch between declining library budgets and increasing journal publishing that will inevitably shake up both institutions and publishing approaches. If you are interested in exploring the core trends affecting research institutions, then read this interesting collection. The changing roles of publishers and libraries are also very evident. The influence of publishers in shaping the debate about copyright is also very evident in the views expressed in the articles, which therefore avoid some of the key problematic of digital rights management, and broader challenges to copyright regimes. Given the immense duplication in academic publishing at present, the emergence of multi-tiered publishing models may not be a bad thing.

**Introducing RDA: A guide to the basics.** Chris Oliver. Facet Publishing. ISBN 978-1-85604-732-6.

AACR2 and MARC were new acronyms to cataloguers some 30 years ago, but ones which are an essential part of the cataloguing vocabulary today. The ideas and disciplines of AACR2 for description and MARC for data interchange have had a profound impact well beyond their original founding countries of Britain, United States, Canada and Australia.

FRBR (Functional Requirements for Bibliographic Records) and RDA (Resource Description and Access) have the potential to be equally important.

Chris Oliver presents a useful overview of RDA, introducing the concepts and principles behind FRBR, FRAD and RDA and their relationship to AACR2 and MARC.

The transition to RDA is one which is fast approaching. The end of cataloguing trials is entering the community will accelerate the need for cataloguers, systems librarians and IT software developers to understand the implications of the transition. *Introducing RDA* is principally focussed on the conceptual foundations of RDA and how it relates to AACR2. The book has some coverage on the implications for MARC but is principally focussed on the implications for cataloguing practice. The wider implications for RDA as a metadata platform for discovery are only marginally addressed, as are the specifics of the implications for underlying library management software.

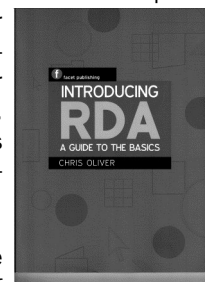
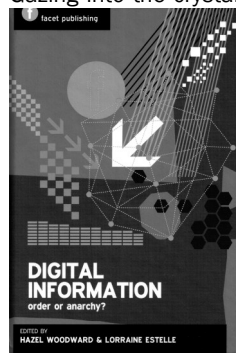
Clearly written and well presented, the book provides a very good overview of RDA. If RDA does not already roll off your tongue, I would suggest you get on top of it pretty soon, as it is coming to a library near you!

**Next -Gen Library Catalogs.** Marshall Breeding. ISBN 978-1-85604-721-0. Facet Publishing.

Marshall Breeding has had a phenomenal influence on the library technology community with his contributions to library technology reports, active dissemination of library technology news and updates and active engagement in open source issues. It is welcome therefore to see a book which distils guidance in the area of implementing new catalogue technologies in libraries..

This book will be useful, or not, depending on your focus and expectations of "Next Gen". This book addresses the new generation of discovery interfaces that library catalogues can present, going beyond the traditional OPAC and presenting the user a portal-style search interface that hides the underlying complexity of data sources. This sort of unified search has come under different names—Federated searching, metadata harvesting. Breeding's focus is at this layer, rather than the web 2.0 user interactivity which is another important transition that is expressed under the banner "library 2.0". Breeding explores NextGen catalogues from a practical implementation perspective: software options: planning, implementation, marketing, best practice and metrics. The inclusion of metrics is welcome, although this section is a little weak—with coverage principally of web-based metrics.

Reviewed by Dr Edmund Balnaves, Information Officer, IFLA Information Technology Section



Would you like to submit a **book review** for the newsletter? Send your book reviews to the newsletter editor ([ejb@prosentient.com.au](mailto:ejb@prosentient.com.au)).

# News and Section Calls

WORLD LIBRARY AND INFORMATION CONGRESS: 77th IFLA General Conference and Council. San Juan, Puerto Rico, August 13-18, 2011

## Call for Papers: e-Legal Deposit: from legislation to implementation; from ingest to access

The Bibliography, Information Technology, National Libraries and Knowledge Management sections together with ICADS are seeking proposals for papers on the topic of e-legal deposit. Many national libraries have implemented legislation or agreements requiring publishers to deposit electronic publications and others are seeking to develop and implement e-legal deposit legislation. Legislation and implementation differs from country to country and national libraries continue to face significant issues around collecting, preserving, providing bibliographic control and providing public access to digital deposit materials. We see different models emerging depending on specific legislation, or deposit agreements in the absence of official deposit laws, and whether or not online publications (e-journals) and websites are included in new deposit rules.

It is proposed to hold 2 X 2 hour sessions, with one session concentrating on policies and issues surrounding the development and implementation of legislation or regulations for e-legal deposit and the other on policy and issues relating to the management, bibliographic control, preservation and provision of access to e-legal deposit materials.

The Conference of Directors of National Libraries (CDNL) discussed e-legal deposit and the results of survey on this topic conducted by The British Library in 2009, at their meeting in Gothenburg, Sweden in August 2010. CDNL agreed to develop a manifesto establishing principles for e-legal deposit. Areas of interest for papers include, but need not be restricted to, the following:

- \* Strategies for advocacy on e-legal deposit
- \* Lessons learned from development and implementation of legislation
- \* Scope of e-legal deposit
- \* Access: onsite only versus remote access
- \* Managing e-legal deposit; preservation, workflow and technical issues
- \* Bibliographies for e-legal deposit material

Proposals for papers should be no more than one page in length. Proposals should be based on a 20 minute presentation. The following information is also required: Name, title and institution of speaker(s); Title of proposed presentation  
Address and email address of speaker(s); Brief biographical statement about each speaker; Language of presentation  
Contact person for response to proposal.

Proposals should be sent to Alenka Kavcic-Colic [alenka.kavcic@nuk.uni-lj.si](mailto:alenka.kavcic@nuk.uni-lj.si), Information Technology Section, before 31 January 2011.

The contact person for each proposal will be informed by the end of February 2011 whether or not their proposal has been successful. Papers, which must be in one of the official languages of IFLA, will be required by 15 May, 2011.

Please note: every paper will have to be presented in person by one of the authors at the WLIC in Puerto Rico.. All expenses, including registration for the conference, travel, accommodation etc., are the responsibility of the authors/

presenters. No financial support can be provided by IFLA, but a special invitation can be issued to authors/presenters if that is required.

## Draft Call for Papers: Education for digital curation

The IFLA Section for Education and Training (SET) seeks papers for its Open Session, co-sponsored by the IFLA Section for Preservation and Conservation, and the International Council on Archives Section for Archival Education and Training (ICA-SAE) on the topic *Education for digital curation*. This topic has been chosen in accordance with the main theme of the conference, *"Libraries beyond libraries: Integration, Innovation and Information for all"* under the Congress Track, 'Ideas, innovations, anticipating the new'. A separate call for papers has been issued for the Section's off-site session, *Internships and placements for the new information society*, organised with the Graduate School of Information Sciences and Technologies, University of Puerto Rico, San Juan.

We are particularly keen to have papers and perspectives from LIS educators, practitioners and students and from a wide range of library sectors (e.g. public, academic, school, special). Research and practice based papers must be original and could cover the educational aspects of issues such as:

- how is digital curation taught? What are the issues involved in teaching digital curation and how are these addressed
- education for digital curation and education for digital library: common competencies, different approaches
- education for active management of data over the life-cycle of scholarly communication
- education for digital long-term preservation
- education for new legal responsibilities in the digital environment: web publishing, reproducibility and re-use
- IT profiles for digital curation: education for Information Technology competencies and skills
- evaluation of Digital curation courses, teaching methods, benchmarking and Government policies

**Language of the session:** The paper should be in one of the IFLA official languages. It is intended that the presentation and slides are in English, but if the presentation is delivered in one of the other official languages, then the slides should be in English.

**Important dates and information:** Proposals for papers must be submitted by: **28 February 2011**. The proposal should clearly indicate the session it is for and include a title, an abstract of no more than 300 words, plus a brief speaker biography and contact details. All proposals will be evaluated by a refereeing committee representing the IFLA Section of Education and

Successful candidates will be notified by **21 March 2011** and must supply the full paper by **1 May 2011** to allow time for the review of papers and preparation of translations. Details on the format and length of the final paper will be emailed to those candidates whose abstracts are accepted.

At least one of the paper's authors must undertake to be present to deliver a summary of the paper during the Section's programme in San Juan. PLEASE NOTE that the Section for Education and Training has no funds to assist prospective authors: abstracts should only be submitted on the understanding that the expenses of attending the San Juan conference (including travel, expenses and conference fee) will be the responsibility of the author(s)/presenter(s) of accepted papers. Some national professional associations may be able to help fund certain expenses, and a small number of grants for conference attendance may be available at: <http://www.ifla.org/III/members/grants.htm>

# IFLA IT SECTION IN BRIEF

## STANDING COMMITTEE MEMBERSHIP

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