

# Information Technology Section Newsletter

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## From the Chair

### TIME TO HAND OVER

Dear colleagues,

This will be my last time providing the opening words for an ITS newsletter issue in my role as the Section's chair. Standing committee membership is for two terms, and as with other committee members the same is true for the chair – indeed it is an opportunity to renew the work of a Section. When I became a chair in 2006/7 this was unexpected and unprepared, because my predecessor had to leave his role in IFLA suddenly. I was a novice to the Section and had just started to learn as Secretary. I noted that ITS in former times had done a lot of work focused on standardization and network issues, on activities with regard to less-developed countries and on the different activities of IFLA driven by the need to encourage the use of basic Information Technology (including OPACs!) in libraries<sup>1</sup>.

Over the years, from my point of view, the IT Section has covered a lot of topics with different partners and it was difficult for me to continue this breadth of work in the same manner. Without any doubt, the bandwidth of topics where IT generally is involved has rapidly grown and I believe it became important to focus the action areas where the IT Section was active and visible. Following discussions within the Section, we defined building blocks where we would concentrate our actions. These core topics of interest are currently:

- Open Source Software in libraries
- Semantic Web
- Digital Preservation

The method by which we address these topics is listed in our strategic plan, which we publish on a regular basis on the IFLA website and in this newsletter<sup>2</sup>. These core topics are extended to other related topics and themes which are of strong interest in the community. This is the reason why we founded Special Interest Groups (SIGs) on RFID and Library 2.0, for example.

Today ITS is one of the largest sections within IFLA, our voice is recognized and valued. Our newsletter was highlighted several times and we have to say thank you to our information coordinator, Edmund Balnaves. Most of the Section's success is achieved by volunteers (visible in Congress programmes), fruitful co-operation with other sections and dedicated events like the satellite conference in Firenze 2010 on "Emerging Technologies...". I'd like to thank all the helping people, especially Alenka Kavčič-Čolić, our secretary, who acted as the driver behind most of our program activities in the last three years. Ongoing plans to attract and inform colleagues, to offer valuable contributions to debates in the library community, identify and address new and relevant topics, organize and join the right people, strengthen the role of IFLA as an umbrella for the whole community with special regard to new technologies and new ways to think about librarianship.

This year again we have an attractive programme, starting with the satellite meeting in Atlanta and addressing hot topics in libraries like legal e-deposit, RFID and linked data. And for WLIC 2012 in Helsinki there are plans for a pre-conference on semantic web technologies. All these initiatives give the Section and the new standing committee members an excellent starting point for work and new ways/ideas to direct the Section in the coming years with their own topics.

Reinhard Altenhoener

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(1) <http://archive.ifla.org/VII/s21/publications/40YearsOfSIT.pdf>

(2) <http://www.ifla.org/files/information-technology/strategic-plan/2010-2011.pdf>



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.

## 2011 IT Section Activities

DATE AND LOCATION	SESSION	EVENT
10-11 August Emory University Atlanta, Georgia, U.S.A	Satellite meeting	IFLA Satellite meeting: The Effect of Technologies on Library Design: building the 21st century library / Sponsored by: IFLA Standing Committee on Library Buildings and Equipment & IFLA Standing Committee on Information Technology
12 August Legislative assembly of Puerto Rico San Juan, Puerto Rico	Satellite meeting	IFLA Satellite meeting: Strategies for managing digital library sources on the occasion of the 27th Annual Pre-Conference of the IFLA Section on Library and Research Services for Parliaments / organized through the Global Centre for ICT in Parliament in cooperation with the IFLA Section Libraries and Research Services for Parliaments and IT Section.
13 August 9:15-11:45 (Room 202b)	19	Standing Committee meeting - Information Technology
17 August 8:00-9:00 (Room 102c)	158	Standing Committee meeting - Information Technology
17 August 09:30 - 11:30 (Room: Exhibition Hall A)	163	Discussion of final report of the 'Library Linked Data' incubator group – Semantic Web Special Interest Group
17 August 13:45 - 15:45 Room: 104	186	Ten years on: the use of RFID technology in library context. What is our main point of interest to support, maintain and develop this cutting-edge technology – Radio frequency identification (RFID) Special Interest Group
18 August 8:30-10:30; 10:45-12:45, (Grand Salon A/SI)	193 + 198	e-Legal Deposit: from legislation to implementation; from ingest to access / organized by the Bibliography Section, ICADS, Information Technology Section, National Libraries Section and Knowledge Management Section
18 August 13:00 - 16:00 (Room: 209)	217	Education for digital curation – Education and Training Section with Preservation and Conservation, Information Technology; co-sponsored by ICA Section for Archival Education and Training

## 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)

**Chair:** Reinhard Altenhoener,  
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# IT Section

## Editorial

Editor: Edmund Balnaves

The last year has seen expansion and consolidation of major digital library initiatives around the world, with a growing focus on interoperability and sustainability of digital collections. The technology for managing digital libraries is increasingly accessible to smaller research organizations and in conjunction with open access is providing extraordinary resources online. Some publishers (such as IEEE) are introducing hybrid licensing models allowing elements of open access as an option or pre-publication open access as part of their licensing agreement with authors.

Google continues to add to its pool of astonishing applications. The breadth of applications made available by this web behemoth is astonishing, as is their energy and creativity. However equivocal one may be at their intentions, their sheer information bravado is astonishing. Google Docs introduces a scriptable platform for simple web-based forms. Google News provides consolidated news feeds. Google Books takes their venture into e-book supply, leveraging their enormous underlying resource.

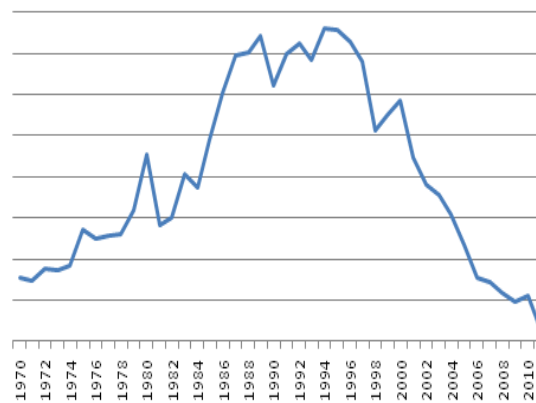
The replacement of physical resources with electronic continues at a pace faster than the resolution of copyright, archiving and licensing issues. In the special libraries I deal with regularly, this trend has accelerated significantly. This has both positive and negative impacts. I can see a growing uniformity of holdings across many special libraries as they discard individual subscription models and replace this with consortia deals. This is changing the heterogeneous flavour of the union catalogue into a mono-cultural flavour. Having introduced Koha to many special libraries in the last two years I have been in an unusual position to see the detailed profile of many quite diverse library collections. The graph displayed above shows the holdings of books by publication year across 40 special libraries. The decline of book purchases in special libraries is profound. The last decade has seen

this trend accelerate. It is apparent that special libraries passed "Peak Book" in the early 1990's. This graphic vividly expresses the changing face of service delivery in libraries.

The library has much at risk in a context where apparently effective resources are available free of charge: at risk is their relevance and their authority as a trusted information source.

It becomes all the more important for libraries to place themselves squarely in the new information routes of their clients, including social networking. Life in the electronic world implies great demands for ongoing professional development for information professionals (such as librarians), as the information environment is quite unsettled. Facebook has emerged as victor in the social networking arena (for now), having out-networked its former major rival MySpace.

However the social networking environment remains mutable. The rapid success and equally rapid decline of some social networking sites is reminiscent of the boom/bust population cycle of lemmings. The choice of and need for presence in these forums centres on understanding the library patrons: what their information needs are and how to position the library to fulfil their needs.

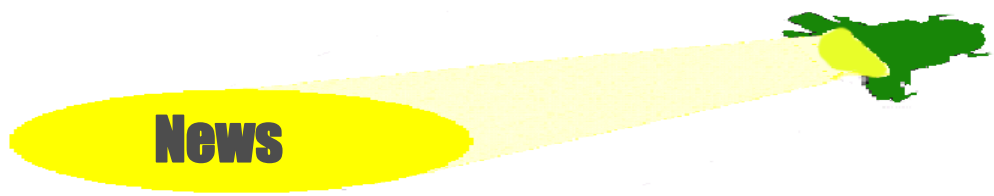


Peak Book for Special Libraries?

## IT SECTION MEMBER PROFILES

The standing committee plays an important role in IFLA, providing focused direction in key areas of library endeavour. This year has seen the election on new members to the Section and the re-election of several existing Standing Committee members. Every 2 years an election is held for Section members for a 5 year term on the Information Technology committee. Standing Committee members can sit for up to two terms. This issue provides a profile of some of the Standing Committee members.

Professor Dr. Shawky Salem



## Standing Committee members 2011–2016

### Dr Shaky Salem



Shawky Salem was born in Egypt and has Egyptian & Canadian nationality. He holds M.A. and Ph.D. degrees in Library & Information Science (Information Technology). He is a Fellow of the Institute of Information Scientists (UK), then CILIP, and a Member of the American Society of Information Science (USA); ALA & CLA. He is recognized as an active member in the following international organizations: IFLA; FID; ASLIB; MLA; ASIS; ALA; CLA and IITR.

He received the IFLA HONOR MEDAL at the IFLA 75 conference's closing session, 27 August 2009, and received the Jason Farradane International Award UKeig-CILIP 2010.

Dr. Salem is on the Editorial Board of a number of international journals.

He has been a technical advisor for many local, Arab and international organizations such as UNESCO, the Arab League, ALECSO, UNIDO, and the WHO for projects in the Arab world. Also, he has been a member of the International Advisory Committee for the 13th, 14th and 15th International On-line Information Conferences in London, and many international conferences worldwide.

### Dr. Lars G. Svensson

Lars G. Svensson studied mathematics, computer science, history and English studies in Gothenburg (Sweden) and Mayence (Germany) leading to an a Ph.D. in library history. Following professional experience in petrochemistry and as a software developer, he has worked for the German National Library since 2003. His current work focuses on persistent identification and the integration of library data in the semantic web.



### Annika Lund

Ms Annika Lund has been working as an Information Technology Librarian at The Jakobstad City library since 2000. Prior to that, she worked as a network planner for the Fredrika Libraries (1997 – 2000). She completed her Masters degree of Social Sciences (Information Studies) at the Åbo Akademi University in 2002. Ms Annika Lund chairs the IT-Section of Finland's Swedish Library Association 2009 – 2011, and is representing Finland's Swedish Library Association on the Standing Committee.

### Standing Committee Members Elected for the term 2011–2016

NAME	INSTITUTE	COUNTRY	EMAIL
Nina Hyvönen	The National Library of Finland	Finland	nina.hyvonen@helsinki.fi
Shawky Salem	ACML-Egypt	Egypt	chairman@acml-egypt.com
Lars G. Svensson	Deutsche Nationalbibliothek	Germany	l.svensson@dnb.de
Mikhail Goncharov	Russian National Public Library for Science and Technology	Russian Federation	goncharov@gpntb.ru
Frank Cervone	Purdue University Calumet	United States	fcervone@cervone.com
José Luis Bueren Gómez-Acebo	Biblioteca Nacional de España	Spain	joseluis.bueren@bne.es
Annika Lund	The Jakobstad City Library	Finland	annika.lund@jakobstad.fi
Edmund Balnaves	Prosentient Systems	Australia	ejb@prosentient.com.au
Dawei Wei	The National Library of China	China	interco@nlc.gov.cn

# Standards

## RFID

### RFID—the successor of the barcode

by Leif Andresen

A smooth and straightforward check-in/check-out process for books is key to the library business, and RFID can make a significant contribution. The technology is revolutionizing data management in libraries by optimizing the communication and retrieval of item-specific information.

The first experiments with RFID in libraries took place in the 1990s. Since then, the use of RFID has expanded rapidly.

On 1 April, 2011, ISO published a standard harmonizing international guidance to help libraries graduate from the old barcode to RFID tags: ISO 28560, Information and documentation – RFID in libraries.

#### HOW IT WORKS

Passive RFID tags with antennas are attached to books, CDs and other library materials. When these assets are checked into, or out of the library, an RFID reader sends a radio signal to retrieve the information on the RFID tag.

The primary use of RFID in libraries is for circulation to replace barcodes and magnetic strips in books, CDs etc as theft security. A RFID tag support theft security by the value of a system data element: AFI - application family identifier (see **Box**, centre). AFI can identify the user domain of the tag and two values are used for library circulation, distinguishing between items “in-library” from those “on loan”. This information is used by security gates concerning to give a warning if an item with status “in-library” pass by the security gate.

#### Application Family Identifier

The application family identifier (AFI) is used as a mechanism to select tags across the air interface, minimizing the extent of communication transaction time with tags that do not carry the relevant AFI code. AFI value C2<sub>HEX</sub> has been assigned explicitly for library use under the recently finalized ISO/IEC 15961-2.

A library may use the AFI in one of two ways.

A single AFI with the value C2<sub>HEX</sub> distinguishes library items from others products, and avoids the risk of an RFID reader for a different domain, reading the RFID tag on a loan item. It also enables a library system to reject items that carry a different AFI code.

The AFI may additionally be used as part of an “item security system”, where the value C2<sub>HEX</sub> is written to tags of items on loan to a client. When the books are returned, an in-stock AFI is written to the tag (07<sub>HEX</sub>, according to the recently finalized ISO 15961-3).

The ISO 15961 series is being developed within ISO/IEC JTC 1, Information technology, subcommittee SC 31, Automatic identification and data capture techniques, working group WG 4, Radio frequency identification for item management.

More about AFI for libraries: <http://biblstandard.dk/rfid/afi.htm>

The AFI have a general function, which will be more and more important in the coming years with a growing amount of RFID for different use. Every RFID system can validate a RFID tag: is this tag for this application or is it for another application? So a library system only reads tags intended for library use and not future tags in your clothes, tags built into your equipment, tags in books for non-library use. This ensures that a circulation system only handles library items.

#### SERVICE IMPROVEMENTS

A particular benefit of using RFID for library circulation is the ability to handle composite materials. Examples might be a multivolume book, a box set with three

CDs, or an audio book with 15 tapes. A data element records the number of items in the entire set and their identity. The check-out function warns when items are missing. This function solves a major problem of barcode-based self-service.

RFID in libraries can provide functionality beyond circulation. Some libraries use RFID for stock control by scanning shelves and comparing the results with the library's database to find “lost” or mis-shelved items, as well as taking inventory.

RFID may also support the acquisition process. An ISBN or equivalent number on the incoming book tag

might identify itself to the library acquisition module, and provide a link to the supplier and order number. The future ISO 28560 will include data elements for this information. Privacy concerns require that this data be erased before library circulation.

Another potential use for RFID enables users to “show” a book to a screen in the library to retrieve reviews and user comments.

## GLOBAL SOLUTION

Why the need for an International Standard? Books and other assets are not only used by the library that owns them. For example, interlibrary loans are a common way for national and regional library systems to meet user needs while minimizing duplication of relatively low-demand materials.

At the international level, it is also important to ensure that software and hardware vendors of library RFID systems can deliver standardized products. A variety of incompatible national specifications would drive up the cost of these products.

A common solution is also important to avoid libraries becoming dependent upon specific vendors. RFID tags must be available from a variety of sources. Books and CDs from different library vendors should be supplied with RFID tags already inserted.

## ATTRACTIVE BENEFITS

The growth of RFID use has resulted in several countries adopting national processes that specify data models and encoding. But at the same time there is widespread recognition of the need for international consensus. ISO working group WG 11, RFID in libraries, was created for this purpose within technical committee ISO/TC 46, Information and documentation, subcommittee SC 4, Technical interoperability.

The result of their efforts is the three-part standard ISO 28560, RFID in libraries, was published at the end of March, 2011.

**Part 1:** General requirements and data elements, describes the overall data model. Encoding options are described in Part 2: Encoding based on ISO/IEC 15962, and Part 3: Fixed length encoding.

The data model specified in Part 1 comprises 25 data elements (see **Box**, right). The only obligatory element is the primary item identifier, mandatory for items on the shelf. Experience shows that data and description of data elements are more durable than hardware, software and encoding. Security Gates, RFID-tags, and Self service equipment will work in some years and then will be succeeded of new and better products. The software will also be succeeding of new and better products – but the data will endure after hardware and software are replaced by future systems.

**Part 2** deals with encoding rules based on ISO/IEC 15962:2004, which uses an object identifier structure to identify data elements. According to the encoding rules different optional data elements may be selected, including for RFID tags of items in the same library. The encoding rules also enable optional data to be organized on the RFID tag in any sequence, and they provide for flexible encoding of variable length and variable format data. For 28560-2, the data element “Content parameter” contains an index of the data elements encoded on the tag, acting as a miniature directory of the

encoding. This can be used to improve the access to specific data.

**Part 3** defines a basic subset of data elements, specifying how to encode these in a basic block on the RFID tag. Precise specifications are given for encoding other data elements in additional blocks of variable length. Part 3 enables national or other groups of libraries to establish a data model that can

### *Data elements in ISO 28560*

1	Primary item identifier
2	Content parameter
3	Owner institution (ISIL)
4	Set information
5	Type of usage
6	Shelf location
7	ONIX media format
8	MARC media format
9	Supplier identifier
10	Order number
11	ILL borrowing institution (ISIL)
12	ILL borrowing transaction number
13	GS1 product identifier
14	Reserved for Alternative unique item identifier
15	Local data A
16	Local data B
17	Title
18	Product identifier local
19	Media format (other)
20	Supply chain stage
21	Supplier invoice number
22	Alternative item identifier
23	Alternative owner institution
24	Subsidiary of an owner institution
25	Alternative ILL borrowing institution
26	Local data C
27	Reserved for future use
28	Reserved for future use
29	Reserved for future use
30	Reserved for future use
31	Reserved for future use

include optional data elements. The data model can be used to develop standard interfaces, but still support flexible encoding on the tag. For 28560-3 the data element "Content parameter" contains a version number of the standard. DS/INF 163 ("The Danish Data Model") corresponds to ISO 28560-1 and ISO 28560-3. The aim has been that an RFID-tag encoded according to DS/INF 163 also conforms to ISO 28560. But in the editing of ISO 28560 it has been necessary to make some clarifications and some minor changes

Both Part 2 and Part 3 use the 13.56 MHz (megahertz) frequency, which to date has been most common for RFID applications in libraries. However, the division of ISO 28560 into multiple parts opens the possibility for the addition of new parts defining tag encoding using other frequencies.

The standard does not specify communication between RFID readers and an integrated library system (ILS). This is currently managed by the US National Information Standards Organization (NISO) Circulation Interchange Protocol Z39.83 (NCIP) and the standard interface protocol (version 2) SIP2.

National and regional profiling may restrict use of some data elements and make others mandatory. Managing privacy is also part of profiling.

## INFORMATION ABOUT ISO 28560

For relevant up-to-date information, WG 11 has established a Website: [bibstandard.dk/rfid/](http://bibstandard.dk/rfid/). This web site contains an extensive Question-and-Answer document.

You can find answers for your questions about RFID and RFID in libraries in these sections:

- General RFID
- RFID Frequency Issues
- RFID Standards
- Adoption & migration
- ISO 28560 Standards Issues
- ISO 28560-2 Specific Issues
- ISO 28560-3 Specific Issues

The web site also contains conformance guidelines for ISO 28560. These documents give relevant information about RFID in Libraries related to implementation of ISO 28560. Separate conformance rules are provided for the system support, data encoding, data decoding, and data editing processes to enable devices that do not need to support all components to be able to claim conformance. To fully comply with ISO 28560 an RFID system must at a minimum comply with ISO 28560-2 or ISO 28560-3. A system may comply with both these parts of ISO 28560, in the sense being able to support both encoding schemas. The encoding for a tag shall comply with one encoding schema and the library shall choose between ISO 28560-2 and ISO 28560-3.

## GROWING INFLUENCE

Tags encoded according to ISO 28560-3 are used by national systems, such as DS/INF 163 (known as the Danish Data Model, or DDM). RFID interrogators capable of reading tags according to DS/INF 163 can also read tags according to ISO 28560-3. This means that the installed base of DDM, implemented in several countries, can easily be moved to the future ISO 28560.

Most RFID vendors are aware of the upcoming ISO 28560. Committees in several countries are preparing to implement the new standard.

Denmark has published ISO 28560 as Danish standards and DS/INF 28560 as the national profile of ISO 28560-1 and ISO 28560-3. By the end of 2010, more than half of Denmark's public libraries had RFID systems in place. In the United Kingdom, a technical committee from the ISO member body (BSI) has prepared a national profile based on ISO 28560-2. In US the national member body of ISO TC46 NISO formally published the Recommended Practice, RFID in U.S. Libraries (NISO RP-6-2008) in January 2008. A new version of this publication based on ISO 28560-1 and ISO 28560-2 has been released for public comment in May-June 2011.

We expect that several others countries in the near future will develop national profiles.

## IFLA AND RFID

IFLA Information Technology Section has decided to establish Special Interest Group for Radio Frequency Identification - Technology in libraries (SIG RFID). There are several issues to discuss: Exchange of experience with implementation of RFID in different countries, how to develop guidelines for implementation of the international standard, etc.

An important issue will be handling of the privacy issue. We have different legislation around the world, but it is basic that a RFID-tag must not contain personal information. In several countries the RFID-tag attached to a book, CD, etc. for circulation must not even contain information identifying the title. The Danish profile (DS/INF 28560) prescribes that ISBN or title must not be part of the data on a RFID tag for a circulation item.

As convener for ISO TC46/SC 4/WG 11, RFID in Libraries I will invite IFLA ITS SIG RFID to co-operate. The most obvious subject for co-operation is documentation. The WG11 have, with the RFID in libraries Q&A, a relevant information resource about RFID in libraries. We invite the SIG to work out questions about RFID and send them to WG11. We will the do our best to use the involved experts in RFID technology and RFID implementation in libraries to answer the questions - and publish `q u e s t i o n s   a n d   a n s w e r s` at <http://bibstandard.dk/rfid/docs/RFID-in-libraries-q-and-a/index.htm>.

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## ABOUT THE AUTHOR

Leif Andresen is Chief Adviser at the Danish Agency for Libraries and Media and Chairman of Danish Standards S24, Information and Documentation. He is the Convener of ISO TC46/SC 4/WG 11, RFID in Libraries. Mr Andresen has worked on library standardization since the 1990s, focusing in particular on technical interoperability.

## REFERENCES

(1) You can buy the standard at the national member body of ISO, or directly at the ISO store:

<http://www.iso.org/iso/search.htm?qt=28560&published=on>

(2) Hex (hexadecimal) is a positional numeral system with a base of 16. Each hexadecimal digit represents four binary digits.

(3) ISO/IEC 15961-2 Information technology – Radio frequency identification (RFID) for item management: Data protocol – Part 2: Registration of RFID data constructs.

(4) ISO 15961-3 Information technology – Radio frequency identification (RFID) for item management: Data protocol – Part 3: RFID data constructs).

(5) ISO 28560-1:2011 Information and documentation – RFID in libraries – Part 1: Data elements and general guidelines for implementation

ISO 28560-2:2011 Information and documentation – RFID in libraries – Part 2: Encoding of RFID data elements based on rules from ISO/IEC 15962

ISO 28560-3:2011 Information and documentation – RFID in libraries – Part 3: Fixed length encoding

(6) ISO/IEC 15962:2004 Information technology – Radio frequency identification (RFID) for item management – Data protocol: data encoding rules and logical memory functions

(7) see: ISO 28560 and DS/INF 163 <http://biblstandard.dk/rfid/dk/iso28560versusdsinf163.pdf>

(8) RFID in libraries. Q&A <http://biblstandard.dk/rfid/docs/RFID-in-libraries-q-and-a/index.htm>

(9) Guidelines for development of ISO 28560-2 conformant devices  
[http://biblstandard.dk/rfid/docs/conformance\\_28560-2.pdf](http://biblstandard.dk/rfid/docs/conformance_28560-2.pdf)

Guidelines for development of ISO 28560-3 conformant devices  
[http://biblstandard.dk/rfid/docs/conformance\\_28560-3.pdf](http://biblstandard.dk/rfid/docs/conformance_28560-3.pdf)

# Technology Focus

## Resources



## Re-inventing the OPAC as a metadata hub

by Edmund Balnaves

### A DECADE OF CHANGE AND INNOVATION

At the turn of the millennium the Online Public Access Catalogue looked like a mature library system for which nothing much new would be added.

A decade changes a lot in the world of Information Technology. This article will examine the effect of open source and social networking/Library 2.0 as “game changers” in the area of software for libraries. During the last 10 years several open source systems for Integrated Library Management and Digital Library management, and of course Content Management have matured. Because they have matured in an era of intense web innovation, the current generation of open source solutions for libraries typically:

- Are richly web enabled
- Incorporate tagging
- Allow interactivity in the catalogue, including book reviews
- Take advantage of web 2.0 services such as finding book jacket images through ISBN lookups

This article illustrates several ways in which open source solutions have been leveraged to reposition the catalogue as a metadata hub, an access point into a mixture of underlying resources owned by the library.

Clients want digital information – and in many cases will only use the resources that are in digital format. More than that, ubiquitous discoverability is also important, and here an open, web-2.0 enabled OPAC can play a part as it may provide metadata discovery and annotation abilities that go beyond that of the digital library system.

### OPEN SOURCE MYTHS AND REALITIES

“Open source” means a great deal more than “source code provided”. While there are a range of licensing models for “open source”, typically the license is designed to:

- Protect the status of the code as “open source” by requiring those using the software to preserve this status
- Ensure that all releases of the software themselves include the open source provisions
- Provide a range of protections against mis-use of the source code.

It is true the software is “free” in the sense that the source code is provided without a monetary fee for use. However it is a myth to regard open source systems as “free”. Every system that an organisation deploys must be operationally sustained, and new software releases have to be deployed periodically. The management of the software and its infrastructure is not “free”. While open source can avoid quite expensive license costs, the library must plan around the ongoing management of the system over time.

It is a myth to regard open source systems as riskier *because* the software is available for everyone to use. All systems are open to vulnerabilities –some to do with the operating system itself, some to do with weaknesses in the software design. Unlike commercial systems, a key strength of open source is that you do not have to wait on a vendor to remediate any problems that are discovered: the software is there, visible and open to correction.

The reality is that there is now a selection of open source library management and digital library systems that are both mature and stable. Koha, Evergreen, Greenstone, PMB, Fedora and DSpace (to mention a few) have now been through a decade of major release cycles, and provide rich and reliable platforms for system operation.

A further reality of open source systems is that they can be used to leverage other open approaches to systems and web technology (more easily, at least, than some commercial platforms). Because there are no code investments to protect by virtue of being a closed system, open source systems can be moulded to incorporate and adopt web services approaches to information, opening up further opportunities for reuse of the underlying assets management by the software.

### THE CATALOGUE AS A METADATA HUB

One of the elements of institutional adoption of repository software in conjunction with web-2.0 emerging from open source catalogues is the breathing of life and excitement into the library catalogue. The catalogue can now become a metadata hub and an interactive, web-2.0 enabled gateway to resources. This can include:

- User tagging
- User reviews
- Indexing and searching of institutional repository content, including OAI (Open Access Initiative) harvesting capabilities
- Federated views of other content and resources

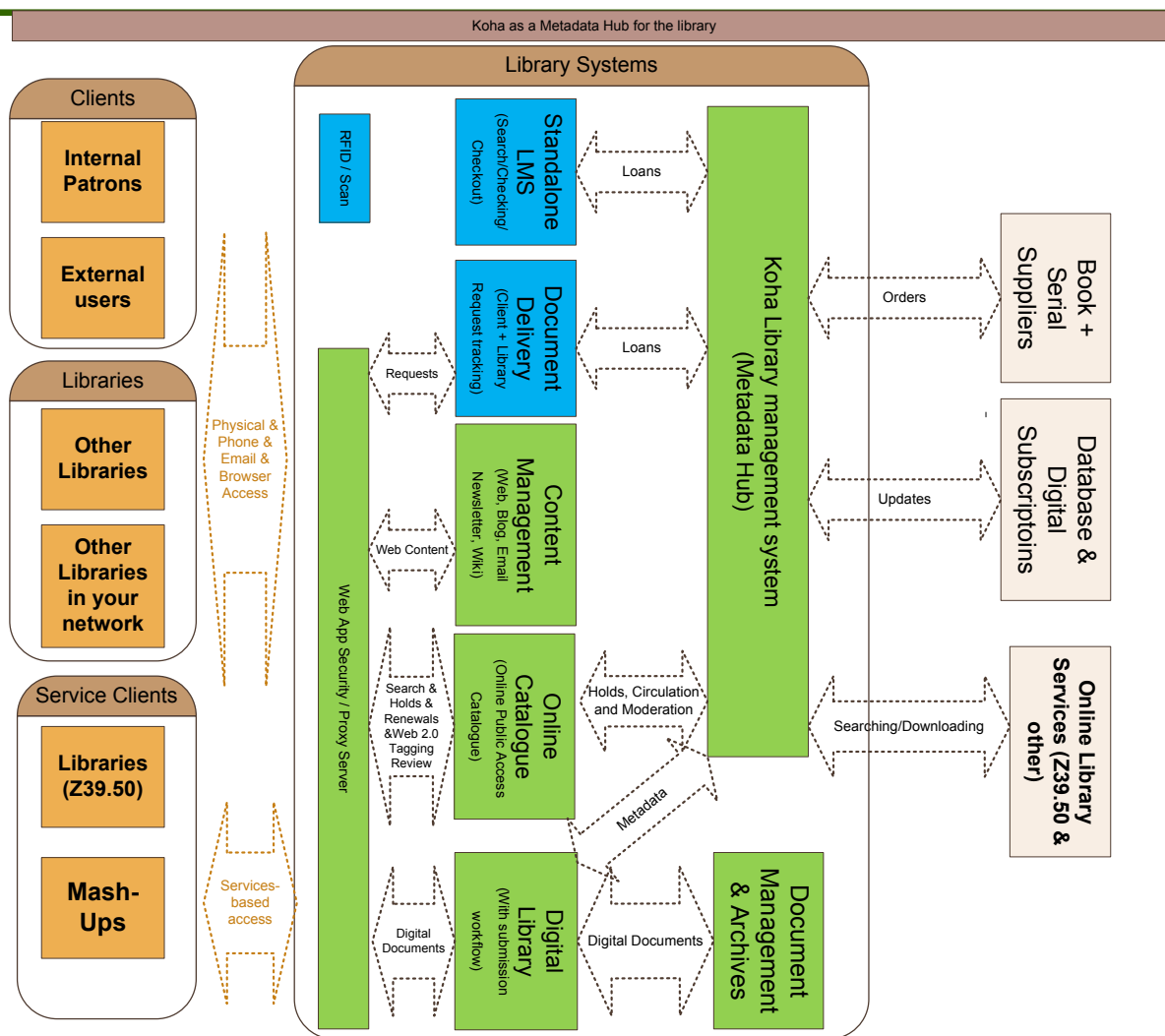


Figure 1: The Inter-Search integrated library management system framework

The illustration above shows how open source can be the glue to build an enterprise library architecture that can include:

- Single sign-on architectures
- Content management
- Digital library management

## THE NSW PARLIAMENT EXAMPLE

The NSW Parliamentary Library has a collection of print and electronic resources that meet the needs of Parliamentary members and their staff. The catalogue, based on Koha, indexes not only the journal and physical collection. It is used to index news and media releases that are captured or received via news feeds. Workflow systems are used to enhance metadata as it is received so that the catalogue has relevant additional metadata information with authority-based subject cataloguing of the news articles.

The electronic documents (news articles, journal articles, media releases and born-digital publications) are archived locally using DSpace.

The MARCXML-base for Koha will make the transition to RDF relatively straightforward over time. Both Koha and DSpace support expression of their metadata through a variety of service layers, including Z39.50 and OAI/MPH.

Parliamentary members and their staff access these resources both locally and through various forms of remote access. Single sign-on is important in this context to avoid multiple authentication to the library management system, the digital library system and other local resources.

## CONCLUSION

Many libraries are well advanced in their transition from physical to electronic resource delivery. The Online Public Access Catalogue, taken as a metadata hub, still provides a valuable model for consolidation of these resources for effective semantic description and discovery of all the resources held by the library.

## ABOUT THE AUTHOR

Dr Edmund Balnaves researches and develops dynamic information retrieval systems. His doctoral research was in the area of systematic content reuse and metadata. His business provides hosted library services to over 400 libraries in the Asia Pacific region. He is the information officer for the IFLA Information Technology Section.

## Book Reviews

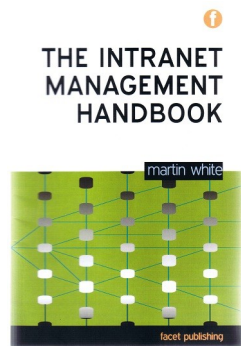
### The Intranet Management Handbook

Martin White.  
London: Facet Publishing, 2011.  
ISBN 978-1-85604-734-8

By design, desire or delegation the library may play a role in managing all or part of the organisational intranet.

Such a role is not to be spurned. Just as the secretary/minute taker can wield subtle power, so also those responsible for the intranet have the opportunity to enhance the visibility of the library in a key vehicle for communication in the organisation.

Martin White presents the reader with a solid and project-oriented process for the management of an organisational intranet grounded in a standard, methodological approach to user requirements, software selection and organisation of the intranet.

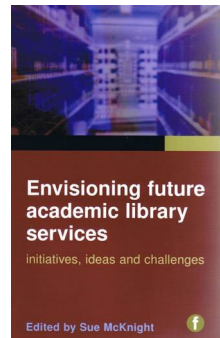


The keyword in this title is “management”. The book will assist a manager given oversight of the corporate intranet. It gives good guidance at the management layer. While there are many other titles that can assist with ideas for content, graphical design, presentation layout and features, this is only the starting point in Intranet management. Intranet Sites that begin with the “look and feel” discussion alone are the most likely to fail to achieve their goal. Martin’s books is solidly directed to the project management process for the Intranet through the full life cycle of selecting, implementing and ongoing review of a corporate intranet. The book is practical in its orientation with plenty of examples.

... and for the librarian given management of the intranet—take Machiavelli’s advice: it is better to be adventurous than cautious. Arm yourself with a good intranet management guide (such as this book) and make sure that your library services have their appropriate level of visibility. Enlist technologies such as RSS, and news feeds, to build awareness of information and events of importance to the organisation. And importantly: measure the current user experience and future expectations. Martin White covers in his book the areas of marketing, enhancement of the user experience and measurement of user satisfaction, as well as the establishment of the frameworks for ongoing intranet governance.

### Envisioning future academic library services: initiatives, ideas, challenges

Sue McKnight  
London: Facet Publishing, 2010.  
ISBN 978-1-85604-691-6



Academic libraries sit squarely in the centre of developments in information resource delivery. This collection of articles is not a maudlin appraisal of the challenges facing modern academic libraries. It is a collection of robust articles that present challenging views of the ways in which academic service delivery will change. The ideas are interesting, if sometimes opinionated, and invariably interesting. Derek Law introduces the book with a journey through the changing nature of literacy and ‘aliteracy’, with the challenges this presents for the library. The interactivity that is essential to the social networking generation is taken forward by Penny Carnaby. Andrew McDonald discusses the library as a changing place and the adaptation of the physical sphere to incorporate changing information and technology. Web 2.0 features in the articles by James Neal, Damon Jagers and P Charles Livermore. Frances Pinter presents a publishers view of the economics of open access and publishing. And digital content is “king” throughout this work, with different aspects of the digital world represented in the articles by Paul Coyne, Helen Hayes, Philip G Kent, and Martin Lewis. Finally the Management aspects of change wrought by new information channels and resources are explored by Liz Wright, Sue McKnight and Michael Robinson.

This book brings together an interesting collection of forward looking articles that do indeed challenge the reader to look through current developments to interpret these changes in new ideas and initiatives for taking the academic library forward.

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)).

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