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UNIMARC for national services: issues and perspectives

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In Italy the main users of UNIMARC Bibliographic format are:

- National Library service - SBN
- National Central Library of Florence for the Italian National Bibliography
- Aleph system as internal format
- Vendors of library automation system for small libraries as internal format and export system
- Other system (CDS/ISIS, etc.)

The [National Library Service](#) (SBN) is the Italian libraries network promoted by the General Direction for Library Heritage and Cultural Institutes in cooperation with the Regions and the Universities, with the coordination of the Central Institute for the Union Catalogue of Italian Libraries and for Bibliographic Information (ICCU). Participating to the SBN are at now more than 3200 state, university, academies, local bodies, and public and private institutions libraries, operating in different sectors.

- The collective SBN catalogue (SBN Index) contains:
 - descriptions of documents acquired from SBN libraries starting from the '90s or since single libraries entered the SBN;
 - descriptions "book in hand" of documents of XVI - XX centuries
 - descriptions obtained from catalogues on paper previous to 1990

SBN is a cooperative library services network with this architecture:

- Central Union Catalogue (Index) at national level
- Union Catalogues (Nodes) at regional and local levels
- Maintains: bibliographical and holdings information.
- Provides services: OPAC, Collective cataloguing, localisation, ILL.

Actually nodes participating are 65

- 3.266 Libraries
- National, University, Local and Specialist
- Over 9 milion titles
 - Authors
 - Localisations
- OPAC – over 1 milion search / month

SBN Evolution: Scope

The SBN evolution project was born from SBN National Coordination Committee pointed out the need to make the index a real infrastructure for the national bibliographic services. Before SBN was a closed software but at the end of 2002 was opening to other commercial software. Therefore, it will become possible for libraries to collaborate in SBN by means of the addition of a functionality specific to their cataloguing client.

Consequently, libraries in Italy can collaborate and cooperate with the National Union catalogue Service using the new communication protocol SBN-MARC based on a XML schema.

The Index Evolution program, on which the ICCU has been engaged for about two years, arose from the need to evolve SBN into a new system, which would become a broad point of reference for the supply of widespread services.

With this in mind, the program offers an enrichment of services, integrations and extensions of the database and the opening-up to new types of usage with varying profiles.

For systems currently in existence – maintenance of the rules already present in SBN, the new system will allow:

- an extension of the services provided by the central catalogue
- an extension of SBN cooperation to other types of material
- a simplification of interactions between central system and node in the new shared cataloguing (including through the introduction of mechanisms for derivative cataloguing).
- receptivity towards other LMS.

The main project aims are:

- Technological hardware and software renewal through the transfer on a UNIX platform, with the use of a TCP/IP transfer protocol and of a standard middleware, with objects oriented programming, using XML, adopting UNICODE standard.
- Rationalization, integration, and reorganization of the existing databases (Modern books, older books, and Music) which were separated and so liable to information duplication on the different archives; new fields addition to support new materials management (graphic and cartographic materials, and electronic resources); and new libraries services offering integrated in a unique database support database such as authority files.
- Creation of a standard interaction interface to allow the Institutions that use other library management systems and UNIMARC and MARC21 as bibliographic formats, to exchange services with SBN index.
- Different cooperation levels management: each Node will be able to choose a specific SBN participation level (downloads, locations, cataloguing corrections).
- New functionalities development such downloaded records.
- Management and monitoring of system performances and databases increasing functions development, which will be available directly to the users, and tools searching duplicates

The main aim of the project is to restructure the complex architecture of the National Library Service (SBN), reviewing both the technological and organizational aspects of cooperation, for the purpose of opening up the system to collaboration with other networks and public and private structures - with special mention of other LMS systems – allowing a major expansion of the services offered to users.

The new protocol, besides guaranteeing continuity of operation of the present SBN Node software, within an architecture and on a database both completely different, is meant to build architectural, organizational and technological tools to achieve the fundamental objectives of growth and evolution of the SBN system.

To process records coming from databases external to SBN has been necessary to supply new services. Such an “opening-up” through a new SBN-MARC communications protocol must necessarily bring tighter controls against duplication of data, but must also allow an integration of data with eventual local solutions.

The model has been designed so as to be able to take in the variety of materials currently being processed by Italian libraries and present in many databases managed by the ICCU that must be absorbed into the new database:

- . Ancient books
- . Modern books
- . Music

The evolution regards the following services:

- Catalogue
- Localisation (Holdings)

Provides support for Librarians in their work and provides statistics and monitoring and integration with non SBN LMSs.

Functional objectives of SBN evolution:

- cataloguing procedure
 - Using SBN-MARC Protocol.
- Open access for NON SBN LMSs
 - Minimum description based on MARC
- Extension of material types managed
 - Using a common standard cataloguing process.
- Extension of statistical and quality management services
(test of the interface dialogue with Aleph and other Italian LMS: certification)

In the open technological architecture (2002-2004) are:

- Different levels of cooperation
 - Full adhesion.
 - Bibliographic record supplier (“off-line”).
 - Bibliographic capture and localisation.
 - Bibliographic capture only.
- User Profiling
 - Descriptive level (minimum or full) and format.
 - Type of “Authority” used.
- Open access via internet protocols
- Open architecture based on common protocols:
 - TCP/IP, HTTP, XML/XSL, SOAP, JMS.

SBN Marc schema

- Xml-schema of new protocol is based on UNIMARC format
- All the message have this general structure:
 - Client information
 - SBN request
 - SBN response

SBN-MARC is 100% compatible with existing SBN software used by the cooperation. The objectives were the integration of existing national databases (Music, Manuscripts, Antique and Modern Documents, Music); the extension to new types of material (cartographic, prints, photographic material etc.); the localisation of documents including digital documents and versions eDocuments. The new open technological architecture allowed access from other LMS and adopted international standards (UNIMARC, Unicode).

The partner could adopt different levels of description depending from cataloguing profile. Other services offered by new protocol are the multiple import of descriptions (batch). (UNIMARC, SBN/MARC, MARC21) and the web interface. For the last functionality is possible to access to authority file management (authors, subjects, classifications, places, uniform titles, repertories) and to quality control and revision (corrections, elimination of duplicates).

The central functions regard the Administration, statistics and monitor, Statistics maintenance and display (both global and local statistics), Tools to check and control duplicate records and . Performance management and technical support functions.

The future issues for the ICCU will be the development of the existing local data base (Nodes) to the new central database model and the migration of the existing network and connection to the new application server.

I want to present another national service: the SBN Central OPAC:

OPAC SBN allows customers to enter with formality of friendly search to the collective catalogue of libraries that take part of the National Library Service. The data base of the OPAC SBN updates weekly. Through the OPAC SBN it is possible to:

- identify documents of interest;
- find libraries owning these documents and access information on single libraries;
- access local catalogues for further information on document availability;
- access the online loan or reproduction services in case the library joins the SBN ILL system;
- access the "authority records", controlled records finalized to guarantee the uniqueness of some access points of the catalogue; currently the records related to a portion of the "authors" file are present and searchable.
- To search single document typologies it is possible to access, by using specific channels, particular sections of the SBN Catalogue (thematic or specialized searches) relative to:
 - Modern Books (monographic publications starting from 1831 and journals with no date restrictions)
 - Ancient Books (monographic publications starting from the XV Century to 1830)
 - Music (manuscript music, printed music, music librettos from XV to XX century, sound recording)
 - Graphic material
 - Cartography
- The 'Other Catalogues' module permits to make, with the same interface, bibliographical searches in other Italian and foreign catalogues conforming to the international standard Z39.50. The module permits to access some predefined catalogues ("Multicatalog search"), searchable also simultaneously. With the

function "Custom search" the user can configure and search other Z39.50 catalogues of which he knows the access parameters.

Regards to the use of UNIMARC format, the **Central OPAC** imports from internal format of the SBN Union Database to central OPAC database are in UNIMARC format. It is possible these functionalities: export UNIMARC, copy cataloguing and UNIMARC format for display.

Concerning the Node software, the Institute wants to conform the software applications of the nodes to the new index, with a client server architecture which, having a more advanced platform than the previous SBN application. All the already active Nodes, gradually are changing and participating to the SBN Network tool, which will be able to offer both the actual advantages (graphic interface, easy use, open platform), and the new functionalities obtained by the SBN evolution project.

For these purposes ICCU had developed a new client for national libraries, web based for cataloguing according to the new protocol rules: it is an Unix web client that is conformed to the new software and using web interface. It manages new authority records and digital resources too. The client SBN/MARC is testing and will be distribute to the libraries in a few months.

At the present the LMS certificated by ICCU for the cooperative cataloguing in the national union catalogue are 10.

Aleph had developed, in the interest of its own members, the interface dialogue with the Indice SBN (SBN Index) , produced by **Atlantis**, in collaboration with **Ex-Libris**. At the moment University of Padua and Florence cooperate in the cataloguing in the SBN union catalogue.

Local tags and solutions Bibliographic format

SBN, BNI and BNCf for its format used these local tag in UNIMARC Bibliographic:

Fields and subfields with value 9

Subfield \$9 for blocks 3-- and 5-- for identifier of linking title

390 standard note for linking

590 See referce uniform title

690 see reference subject personal name

691 see referencesubject Corporate Body

790 See reference personal name

791 See reference Corporate Body name

921 data of typographical device

927 performer

899 Location and holding (SBN union catalog

692 see reference subject family name

695 see reference subject title

696 seereference subject

697 see reference topical subject

899 holding data

950 holding, localisation, inventory number availability for ILL

951 acquisition data

956 local electronic resources

Local tags and solutions Authority format (SBN)

921 data of typographical device

930 codified bibliographic citation (device and Author)

931 subject descriptors

932 descriptor relationship

Italian users' proposals for the extension of UNIMARC Bibliographic format in these years were especially on music and antiquarian material. In this meeting ICCU proposals for the extension of UNIMARC for the Authorities were discussed: especially new tag about Printer device (new authority entity), Activity Note pertaining to printer /publisher and See also reference tracing printer/publisher device.

I hope that these tag, that we used in our authority file could be included in the format.

Finally I want to present the new initiatives that ICCU decided for the UNIMARC activities. On December 2005 was constituted a National UNIMARC Committee composed by experts from:

- BNCf
- Italian users
- Universities
- Public libraries
- ICCU
- IAML Italia

Main objectives of the Committee are to spread information and detailed instructions in the application of format, discuss the proposals of PUC, define and propose to PUC to extend UNIMARC format for all kind of materials not sufficiently covered (i.e. graphic, antiquarian and manuscript) and organize workshops and seminars on specific problems.