



## The Italian National Library Service (SBN): a cooperative library service infrastructure and the Bibliographic Control

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### Abstract

*After an overview of the SBN (The Italian National Library service), promoted by the Italian Ministry for Cultural Heritage, is presented the new SBN system. An evolution project that was born from SBN National Coordination Committee, on the base of the suggestions rose by an feasibility study, pointed out the need to make the index a real infrastructure for the national bibliographic services. Evolution of SBN Index achieved is according to the objectives pointed out in the project and it represent a step towards a larger service network for Libraries and for a future cooperation in different sector of cultural heritage.*

### 1. SBN: Italian National Library Service

The Italian National Library Service (SBN), promoted by the Italian Ministry for Cultural Heritage, is founded on the cooperation among state, regional government and universities with the coordination of the Central Institute for the Union catalogue of Italian Libraries and Bibliographic Information (ICCU).

Indeed one of the objectives of ICCU is the collaboration strategy among Italian libraries for developing services through the country. In the same way in order to improve the knowledge of bibliographic collections, the institute promotes and coordinates the database concerning 16<sup>th</sup> century Italian editions, the National census of manuscripts and the directory of Italian libraries. To support cataloguing activities of Italian libraries, ICCU is responsible for producing, adapting and diffusing standards and rules for cataloguing of all types of materials (from manuscripts to multimedia documents). ICCU acts as coordinator of the SBN and of the digitalization projects spreading metadata standards related to *Italian Digital Library* (BDI).

SBN is a network which aim is to provide services to the end-users. The target is to get over the fragmentation of the librarian structures, typical of the cultural-political Italian history. The purpose is to offer a national service based on the management of a general on-line catalogue and on the sharing of resources to make accessible and available the documents.

Since 1992 SBN became the national network of Italian Libraries aiming at the constitution of Italian union catalogue and the bibliographic control according to international provisions (recommendations) about Universal Bibliographic Control and Universal Availability of Publications.

The libraries are connected to a central host, named Index, where they create or download bibliographical records in return the Index receives localization (holdings) information. New records can be created interactively with the Index. SBN has always used structured data (SQL), *not* flat records as UNIMARC, thus anticipating Functional Requirements of Bibliographical Records. This permits navigation between descriptions using concepts such as “parallel titles”, “other titles”, “other editions”. Records are registered only once and reused afterwards; each record can be improved through different levels of correction (levels of authority) and the modifications are propagated to libraries who participate.

The most evident benefits of the system are:

- saving resources in libraries: especially public libraries download records for over 90% of their documents;
- localization in the national index facilitates the Inter-Library Loan;
- bibliographic control in both meanings of bibliographic description (documentation) of Italian publications and authority level of records;
- moreover, the cooperation has led to a significant professional growth of Italian librarians.

At present in the Italian union catalogue, updated by nearly 4000 libraries participating to SBN, there are about 10,000,000 documents, 3,000,000 authors and about 43,000,000 localizations. Bibliographic records mainly relate to modern and antique (pre-1831) publications, printed and manuscript music.

## **2. Evolution of SBN Index (2001-2003): purposes**

In 2000 the success of the network led to the project of a new coordinated service in SBN with the purposes of supplying a real infrastructure for libraries by extending services provided by the national index and increasing the number of libraries participating in SBN by allowing different levels of participation.

The Index evolution project, was based on: the integration, the new plan of the central database of Index and the opening to other systems and management of different levels of cooperation.

The main aims of the project were:

- the technological renewal of the hardware and software;
- the opening of the SBN Index to library management systems that are not SBN and that use the most widespread bibliographic formats (UNIMARC, MARC21);
- the management of diversified levels of cooperation;
- the development of new activities such as for example derived cataloguing and cataloguing non book materials;
- the development of government and monitoring functions both for the services and for the performances and databases system increasing.
- Compatibility with the existing SBN software used by the cooperation;
- Integration of existing national databases, differently created: Modern and Antique publications had been described with online cataloguing in the central Index; Printed and

Manuscript Music records had been produced by libraries locally with a data entry software, and uploaded via batch in a central system; authority records of authors (personal names) were derived from SBN Index to a specific data base and updated with central functions. The new Index would contain in one data base Modern and Antique publications, Music (printed and manuscript) and authority files of authors, as well as of semantic headings (subjects, classification), standardized places of publication, printers' devices;

- the new database of Index would allow online cataloguing of different types of material: printed and manuscript music, graphic and cartographic materials;
- an open technological architecture, based on common internet protocols (TCP/IP, HTTP, XML/XSL, SOAP, JMS, etc.) allows the access from other library management systems using SBNMARC protocol.

### **3. A new protocol: SBNMARC**

It might be useful to explain the term SBNMARC protocol, that is not a new MARC format. Services provided can be divided into two groups: those executed with offline processes and those concerning shared cataloguing online. Standard UNIMARC and MARC21 records are reconverted in SBN structured data, during Import process (batch) and SBN structured data are converted in UNIMARC and MARC21 during Export process. SBNMARC protocol is employed for shared cataloguing function in the interaction between local library management systems and Index and uses xml messages and a schema based on MARC concepts and attributes.

Local systems interact with Index to request services concerning shared cataloguing. Online services provided are:

- Search (documents and authority entries)
- Localization with two different meanings: the library owns the document and/or the bibliographic record is present in the local database: the second type of localization is useful to libraries who want to receive records modified by other libraries)
- Cataloguing (documents, authority entries)
- Correction (documents, authority entries, proposals of correction)
- Requirement of data alignment (to receive records modified by other libraries)

In order to facilitate other library management systems in the interaction with Index, besides the adoption of international standards (e.g. UNICODE as character encoding standard), the project provided most of checks (data consistency and data mandatory) charged to SBN central system application.

### **4. Libraries profiling: flexibility and level of participation**

As the new Index intends to become a real infrastructure for libraries and to increase the number of libraries participating in SBN, the project provided different levels of cooperation:

- bibliographic capture and localization for libraries which can only download and localize records
- cataloguing level for libraries which can also supply new bibliographic records but don't require data alignment
- full adhesion for libraries who catalogue, modify records and accept records modified by other libraries in their local catalogue.

As for user profiling, libraries can also choose their descriptive level; their profile indicates for each material whether they are interested to receive specific data (tag 116 for graphic material; 120, 121, 123 and 124 for cartographic material; 125 and 128 for printed Music) for each authority file, in

addition to authors (e.g.: uniform titles, subjects, printer device, etc.), whether they can create, modify, or just download and use authority entries.

## **5. Open access for non-SBN LMSs and propagation of SBNMARC protocol**

More than 20 software houses asked for the access to the test environment and 16 have already obtained the certification of SBNMARC compliance. Of course not all the applications for cataloguing in SBN interact with Index at the same level: some library management systems developed just the messages useful for search and localization; most of them developed more actions, but don't allow to create new entries for all the authority files or don't provide coded data fields for special materials. Five library management systems obtained certification of SBNMARC compliance at the highest level, for all authority files and special materials.

At present the new SBNMARC protocol is used by 16 of the existing 69 SBN nodes: most of them had been using the old SBN protocol for many years and now have just changed application; but 6 new nodes have already connected to SBN interacting with new protocol. Within 2009 four new nodes are expected to be constituted with certificated library management systems. Probably within 2011 all the existing nodes using the old SBN protocol will change their applications and Index will be able to use SBNMARC as a single protocol towards any client. This will simplify further developments to provide new services in the future.

## **6. Final policy considerations**

Index has been evolving since 2004 towards an interaction based on a simplified protocol and on a complex variety of profiles allowing libraries to choose not only their library management system in a larger number of SBNMARC compliant applications, but their level of cooperation as well. Today we are going to receive benefits coming from the achievement of the project but great care must be taken to avoid that flexibility could reduce cooperation and the quality of bibliographic records. Index actually assigns one user's profile to all libraries connected to one local database.

While once aggregation of libraries in nodes was based on a territorial criterion, because a group of libraries located in the same area satisfy the same group of users for their different demands, today it might be interesting to re-examine aggregation criteria considering the bibliographic control in terms of quality and completeness of cataloguing data. More exactly, both criteria can be satisfied if we consider OPACs as users' catalogues and SBN local databases as librarians' catalogues. Libraries working on different library management systems can download their bibliographic data and update one OPAC as well as libraries working on the same local system can update different OPACs, but it is much more difficult to keep the consistency of the union catalogue originated from the cooperation of "nodes" gathering so many and so different libraries. Through data alignment each node can receive bibliographic records updated by national libraries cataloguing at top authority level and OPACs can be improved by uploading more complete bibliographic records, whereas the union catalogue cannot discern the actual level of bibliographic records described by different libraries connected to the same node. In this perspective, for example, it is expected that both national libraries of Florence and of Rome might join in a single SBN node, with a top cataloguing level, and they might upload their records on two different OPACs for services to users.

More generally, SBN government Committee point out guidelines and best practices in order to preserve SBN from risks arising from a not regulated expansion of network. Main goals are:

- to subscribe agreements with new nodes specifying the cooperation level of libraries connecting, both in terms of cataloguing and of document availability;
- to encourage the creation of uniform local databases for cataloguing profile and authority level of bibliographic records;
- to check and evaluate capabilities of certificated LMSs as for managing different profiles of libraries in local nodes;
- to promote education and training activities for librarians to reduce the disparity in cataloguing levels in a single node.

The new infrastructural aspect of the Italian service (SBN) and its flexibility towards local system and other communities is to be reconsidered in the perspective of bibliographic control. Evolution of SBN Index achieved is according to the objectives pointed out in the project and it should represent a step towards a larger service network for Libraries and for a future cooperation in different sector of cultural heritage.