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## **Analysis of the secondary database archived audio at the National and University Library “St. Clement of Ohrid” – Skopje**

### ***Introduction:***

The formation of secondary databases for the archived audio play an essential role in the registering of the data relevant for its existence. The database for the archived audio at the National and University Library “St. Clement of Ohrid” – Skopje is currently the largest audio material database in Macedonia. It is part of the global database COBIB.MK. This global database includes the local databases of the Faculty for Math and Science in Skopje, the Macedonian Academy of Arts and Sciences, the Home University Library “St. Clement of Ohrid” – Bitola, the National Library “Goce Delchev” – Shtip, the Community Library in Strumica and the Republic of Macedonia Film Library. At this moment, the legal center for the archivation of audio materials is the “Collection for Music Art” at NUL – Skopje. The NUL-Skopje audio files contain: 22 391 sound carriers (15 838 records, 7 000 audio cassettes, 80 magnetic tapes, 400 compact disks) which in content cover different music genres as well as speech samples. With the introduction of computer technology, since 1997 NUL has begun the formation of a secondary database for audio materials. Audio materials with national significance were prioritized, such as recordings by famous Macedonian composers, arrangers, lyrics writers and performers. The NUL database was formed with the COBISS system.

### ***Aims and tasks:***

The fundamental aim of this paper is to carry out an analysis of the secondary database for the archived audio at the National and University Library “St. Clement of Ohrid” – Skopje. The database analysis is based on the following elements:

- use of standard bibliographic descriptions of the recordings: ISBD(NBM), ISBD(ER), IASA Catalog Rules and AACR2;

- anticipation of the existing international standards for bibliographic descriptions in contemporary media, i.e. computer processing of secondary data through the MARC standard
- public access of the database through one of the most widely used and most modern tool – the Internet.

We shall also refer to the database software solutions in terms of two segments, data input – defined through the term ‘catalogization’.

### ***COBISS***

COBISS is an organizational model of libraries connected through a uniform library system with uniform shared cataloguing, the COBIB union bibliographic/catalogue database and local databases of the libraries involved, the COLIB library database, and the so-called virtual library.

COBISS2 and COBISS3 are two generations of the COBISS software for library automatization and access to different databases on the web.

The COBISS system structure and its technological platform are based on the VAX/VMS computer systems in the DECNET network with terminal accessed, using Cobol, Basic and Macro programming languages which later include new technologies (the Internet, AXP Alpha, Open VMS, TCP/IP, C Visual Basic, Delphi, etc.)

One of the functions of the COBISS3 software is its three-tiered architecture composed of User-Interface tier, Application tier and Data Store tier, all connected with a Java distributed object model (Remote Method Invocation – RMI). Data Store tier also includes Object Store, which is an object-oriented database management system.

The COBISS3 software is in Java and allows the applications to run on different platforms.

### ***Shared cataloguing***

Shared cataloguing features a close connection between the local databases/catalogues of individual libraries and the online union database/catalogue. Shared catalogization in fact signifies the process of describing audio samples, i.e. the process of data input in the database.

The database is composed of bibliographic records of book or non-book materials (monographs: books, scores, audio cassettes, magnetic tapes, compact disks, records, atlases, maps, graphic impressions, photographs, etc.) which can be multimedially presented. It also includes additional records of performed works to enable research of bibliography creation.

The structure of the bibliographic record and of the complete library holdings is identical with the COBIB union database and of the local database level of the participating libraries. The local databases have an additional uniform structured copy which consists of specific holdings data, vital for the library, its local function and the display in COBISS/OPAC system.

In order to exchange information in the COBISS system, the COMAR/B Format is used for bibliographic records, as well as the COMARC/A Format for authority data and the COMARC/H Format for holdings data. The first two formats are based on the UNIMARC Format, whereas the third was developed by IZUM. International exchange employs UNIMARC.

In the online shared cataloguing, data are entered on a local system (server). Thus a local database is created and the local system is sustained, where as simultaneously, the COBIB online union database is generated on the server from the Library Informational Service. During this process, online indexing with over 80 search indexes for bibliograph and authority data and holdings is carried out.

Data input is carried out though the use of previously defined masks for inputting monographic publications, collections, serials or articles. Each library decides whether the optional fields will be included. The fields vary in their length, and they are repeatable or non-repeatable depending on the chosen mask.

The libraries included in the shared catalogization use COBISS2/Cataloging software to make other local functions automatic, such as input, borrowing, reports,

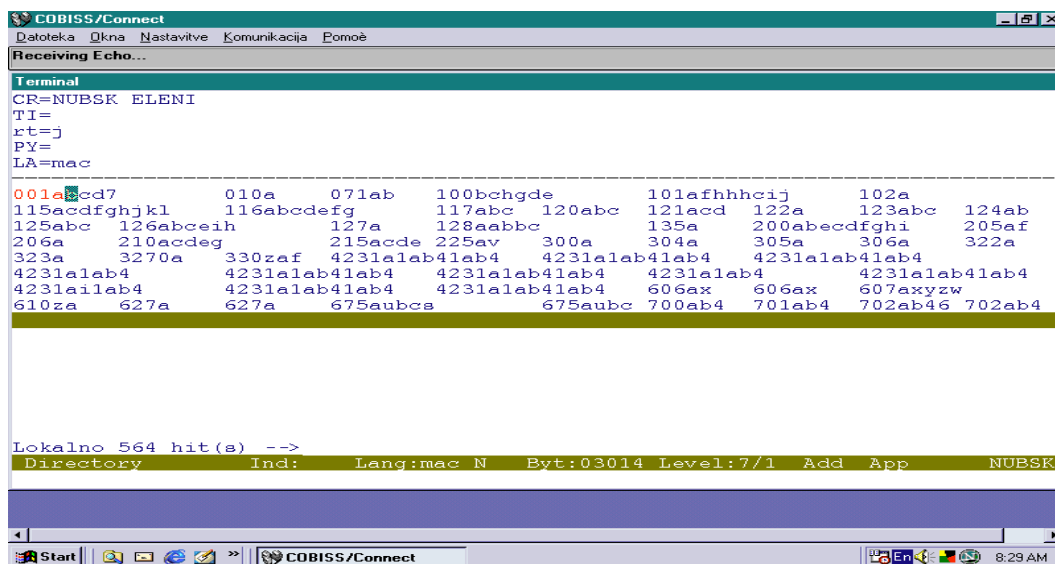
material purchasing, inter-library borrowing, periodicals. Special modules are used for these functions.

Access to the data is enabled through COBISS/OPAC – a web application allowing the library and its users online access to: the bibliographic database/catalogues in the COBISS system (COBIB and local databases); other COBISS databases (COLIB, CORES, CONOR, ELINKS); specialized databases (by domestic or foreign providers) from the Library Information Service servers.

***Standardization of the COBIB.MK database – standardization of the NUL-Skopje audio material database***

As we have already mentioned, the secondary database, i.e. the bibliographic NUL-Skopje audio material database is part of the global NUL-Skopje database. Data input is carried out through masks for the so-called non-book material. In order to maintain uniformity with the world databases, the NUL-Skopje database is founded on the MARC standard. Since the catalogue records consist of a bibliographic description including: 1) description of the item, 2) main entry and added entries, 3) subject headings and 4) the classification systems or call number, the MARC standard implements the bibliographic description standards, i.e. secondary data input for audio materials, ISBD (NBM), ISBD (ER). MARC requires implementation of local and global standards for subject heading, composing thesauruses and using classification systems such as UDC. The National and University Library uses its local standards and the UDC system for subject headings, i.e. it uses the universal decimal classification where the content and form of the work is described by numbers.

*mask for audio recordings input at NUL-Skopje*

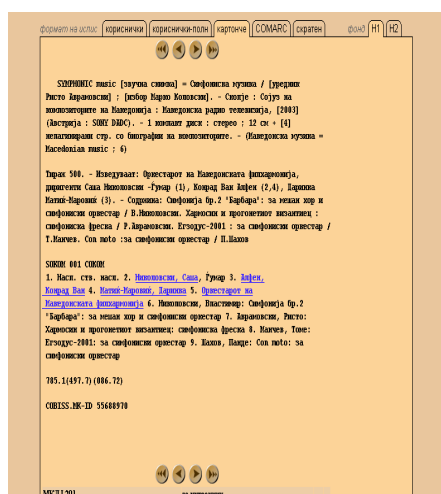


### Basic fields used for the processing of audio materials in the NUL-Skopje database

Fields in the database are grouped in UNIMARC sections in the basic groups: 0XX, 1XX, 2XX, 3XX, 4XX, 5XX, 6XX, 7XX and 9XX. Each field includes a sub-field usually marked with a letter of number. Some have up to two indicators which define the type of sign-out from the catalogues or bibliographies, or serve as additions to the databases in the field. The smallest unit of information recognized by the program system is the sub-field.



*MARC format record*



Catalogization does not require employment of punctuation symbols demanded by standards. They are written programmatically. Data input is carried out through entering the fields and sub-fields. Both can be erased, copied, re-created. The PF2 key carries out the survey of codes within the fields. Several keys enable the input of specific diacritical marks.

The database is searched during the creation of the new record. The search is also conducted in the local and uniform database (the host). Duplicating records in the database is prohibited, as well as memorizing inadequate entries of such records (this is prohibited by program controls in the COBISS/Catalogization). Records can be copied and transferred from one place to another.

### ***Public access of data through WWW – OPAC***

The NUL-Skopje audio material database is user accessible through the Internet web-page [www.nubsk.edu.mk](http://www.nubsk.edu.mk), i.e. through the OPAC – online public access catalogue. Searching the base can be conducted in several ways: basic, optional and required. In order to produce positive results, directions are supplied as to how to conduct the search; abbreviations and meanings are also given. Limiting the search in terms of the type of material needed (e.g. audio cassettes, CDs and so on) is also possible. Depending on the necessary data, a list of data is also possible in many ways: user, user-full, catalogue card, comarc and abbreviated.



OPAC of NUL-Skopje



### ***Advantages and disadvantages***

The analysis of the National and University Library “St.Clement of Ohrid” – Skopje secondary database displays: unification with all existing standards for exchange and transfer of information owing to the MARC standard employment. The standards for international bibliographic descriptions were also used for data input (ISBD (NBM), ISBD(ER), IASA Cataloging Rules, AACR2), complying to the audio material description and input of their secondary data. For subject headings of the NUL-Skopje database international rules are employed, as well as the local “Subject headings and subject catalogue” complying with global standards. The UDC – Universal Decimal Classification is implemented for the purpose of achieving communication on an internationally recognized level. This classification enables the exchange and survey of the materials in the database. All relevant data concerning author, title, performer, year of issue or publisher, usually necessary for receiving basic information about the specific audio, is implemented in the database and can be searched by the database users.

Disadvantages concern the software solutions for the data input. This problem occurs during the repetition of specific data in two fields with a different meaning, such as the field 327 which refers to the content of the processed unit and the field 423 which refers for example, to the specific compositions the unit includes. The repetition of data is an error in the software solution, but on the other hand it still enables search of separate compositions and authors which are part of the content of the audio.

The complexity of the MARC standard requires its sufficient knowledge for data input. Data input is impossible without prior training.

As far as the user access of the database is concerned, at the moment it is accessible on the Internet but still does not include metadata which would immediately show the audio data from the database when using the famous search engines such as Google, Surfswax or Yahoo. In order to attain information from the database, users must search through OPAC of the global COBIB.MK database or the NUL-Skopje database.

### ***Conclusion***

The analysis of the NUL-Skopje archived audio secondary database proved that this is the only database complying with international standards. It implements ISBD(NBM), ISBD(ER), UNIMARC and other classifying elements. Thus, unification with global secondary audio database formation is achieved, as well as the (computer)

exchange of information through institutions or audio databases in the world. The access of data for users is carried out through local computer units at NUL-Skopje, as well as the Internet. Its OPAC, as previously mentioned, enables simple searching and fast access of information.

The realized aims and tasks of this paper confirmed that the NUL-Skopje archived audio secondary database provides an example for the future formation of databases by institutions archiving audio. With this study we hope to aid future expert and standardized processing of secondary audio databases in the Republic of Macedonia.

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