

## **Experimental IRAM Multimedia Internet Database of the Macedonian Contemporary Music**

The Web site about the Macedonian contemporary music and composers has been established in 1997 at the UKIM Faculty of Music – Skopje. Following the permanent development of the possibilities of the Internet, we felt the need to upgrade and raise this site to a dynamic level.

The digitised multimedia items of the archives in the IRAM studios are kept in a database. With adaptations, this multimedia database can be used as a source of information for the dynamic Web site.

As an IRAM project, we created a separate Multimedia Database of the Macedonian Contemporary Music, and presented it on the Internet. The aim of this research project was to examine the standards for creating multimedia Internet databases, and to adapt the IRAM multimedia database according to these standards.

The term of Macedonian Contemporary Music refers to the so-called "classical" genre, covering the first composers of the Macedonian profane music dating from the composer Atanas Badev (Nineteenth century), until today.

The Internet database of this project covers the following composers: Atanas Badev, Todor Skalovski, Trajko Prokopiev, \_ivko Firfov, Petre Bogdanov – Ko\_ko, Gligor Smokvarski, Stefan Gajdov, Vlastimir Nikolovski, Kiril Makedonski, Blagoja Ivanovski, Toma Pro\_ev, Tomislav Zografski, Dragoslav Ortakov, Mihajlo Nikolovski, Sotir Golabovski, Dim\_e Nikoleski, Stoj\_e To\_evski, Risto Avramovski, Blagoj Canev and Stojan Stojkov.

### **1. The structure of the Multimedia Internet Database of the Macedonian Music**

The structure of the multimedia databases of the projects of IRAM was already established as:

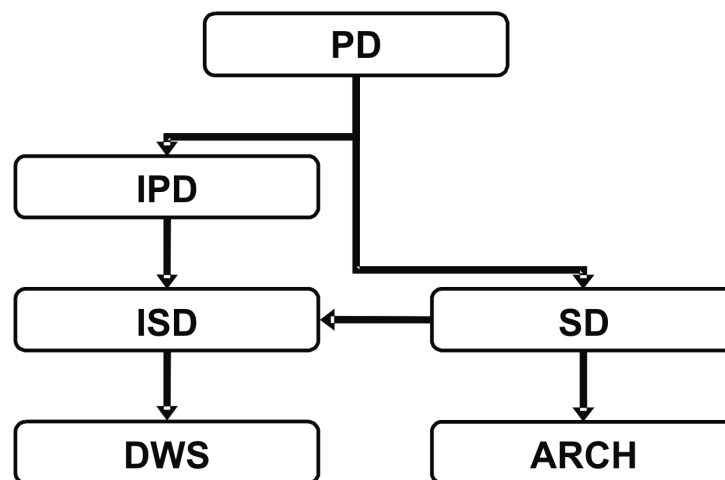
- Primary data (digitised materials of the archive), and
- Database of secondary data.

The primary data are grouped in four segments, according to the type of the data and the file formats:

- Audio
- Text
- Video/graphics
- MIDI graphics

The presentation of the digitised multimedia files on the Internet requires a change of these files in terms of their adaptation according to the specific Internet standards (Picture 1).

The database of the secondary data is textual information about the digitised files, organized in datasheets. By moving the existing datasheets along with some new specific fields in database software with Database Management System, we can implement this database in the web site easily.



Picture 1 The structure of the multimedia database for presenting archive materials on the Internet

The Primary data (PD) is the core material of the databases created for archive and preservation purposes. The database of the secondary data (SD) contains textual data and information about the Primary data. Primary and secondary data are created for the needs of the archive, and are available for the archive users only.

For the Internet purposes, we create a copy of the primary data in reduced file formats (IPD). For the secondary data database, we take the required fields from the existing database; we add new fields related to the IPD, so that we create a new, Internet Secondary Data Database (ISD).

The goal of presenting the digital multimedia Internet database is fulfilled by creating a dynamic Web site (DWS) which reads the data directly from the ISD Database. In this manner, the dynamic Web site functions as a link between the Internet user and the archive (ARCH).

## 1.1 Presenting primary data on the Internet

The bit rate level of data migration on the Internet requires files with low capacity.

When publishing the multimedia database on the Internet, the primary data files have to be converted to the Internet standards or resized, according to the data type, and then to be transferred into the Internet Primary Data Database. The copies of the primary data materials are in reduced files formats and are preview copies.

The purposes of presenting these primary data on the Internet are:

- Preview of the digitised materials, and
- Representation of the composers' works.

The file formats of the primary data preview copies are as follows (Table 1):

Table 1 File formats of the primary data preview copies

| Type of data   | File format                 |
|----------------|-----------------------------|
| audio          | MP3                         |
| text           | text field in the table     |
| scores         | <i>Sibelius</i> , sib       |
| video/graphics | <i>Quick Time</i> , avi/jpg |

## 1.2 Metadata and secondary data in the Multimedia Internet Database of the Macedonian Contemporary Music

Incorporating the fields entitled as "Dublin Core Metadata Element Set" (see bibliography) in our secondary data database was a condition for meeting the standards for publication of archives on the Internet.

The metadata is not presented on the Internet web page for the following reasons:

- The contents is irrelevant for the web site and does not fulfill the promotional function of the site (the members of the team creating the database, technical data for the files etc.); or
- The contents is copyright (catalog no. of the original recording, recording equipment etc).

## 2. Primary data items included in the Multimedia Internet Database of the Macedonian Contemporary Music

The definition covering this project contains a large amount of items. The criteria for selecting the items included in the project were essential.

Choosing the titles for digitization was made by the following standards:

- Recorded works of a particular composer are not necessarily the most representative ones. Since items for the digitization have to be previously recorded works, for choosing the digitization pieces we consult the composers themselves.
- A representative segment of the digitized piece is presented on the Internet in consultation with the author.
- The matter of rights is to be solved in cooperation with the institutions for rights and the owners of the rights, i.e. composers.

Until now, the Multimedia Internet Database of the Macedonian Contemporary Music contains primary data items for the following composers: Dragoslav Ortakov, Blagoj Canev and Stojan Stojkov (Table 2).

Table 2. Primary data items included in the "Multimedia Internet Database of the Macedonian Contemporary Music"

| Composer          | Title of the fragment                        | Score  | No. of photographs |
|-------------------|--|--|--------------------|
| Dragoslav Ortakov | <i>Quatuor a cordes</i>                      | <i>Quatuor a cordes</i>                              | 15                 |
| Blagoj Canev      | Sonata <i>in Es</i> – for clarinet and piano | Concert for piano and string orchestra, movement III | 5                  |
| Stojan Stojkov    | „_____“, for mixed choir                     | „_____“, for mixed choir                             | 8                  |

## 3. Design and navigation within the web site of the Multimedia Internet Database of the Macedonian Contemporary Music

The aims of the web site differ from the ones of the electronic archiving. The aspects of web design require simplicity, clarity and readability in presenting the elements of the database that are arranged in a "user friendly" manner.

In the web site of the Multimedia Internet Database of the Macedonian Contemporary Music the information is set in the following elements:

- Biography;
- Composer's works;
- Published theoretical works;
- Photo-gallery;
- Video clips;
- Available audio clips and
- Available scores.

This information is presented on the web site in two different manners:

- All categories by the certain composer, or
- Available composers/items by category.

The body of the web site is reserved for searching the database by composers. The search mask is designed as a combination of radio buttons (for selecting the category) and a drop list (marking the composer to refer the category).

The "category" button in the header of the web site offers all the categories, and displays the results as a list of available composers/items found in the category selected.

The "quick search" field in the header is searching only the *Title* field of the *Composition* table. The input of database is in Macedonian language (the original language of the names and titles) with Unicode transcription. When searching with the "quick search", it is of utmost importance to type the required title correctly.

The multimedia files (audio, video, photographs and scores) are displayed in individual windows, arranged for the specific type of the file.

Although the processes lead to the same final search results, we decided to give the users opportunity to search the database in different manners, according to his needs and the previous knowledge.

## **Conclusions**

The aim of this project was to examine and implement the standards for creating digital multimedia Internet databases. The Multimedia Internet Database of the Macedonian Contemporary Music, along with the dynamic web site based on the database, is a result of continuous monitoring, and putting into practice the theoretical research.

The research resulted in the following conclusions:

- The basis of the multimedia databases are the archived items
- The archived multimedia items presented on the Internet have to be in a reduced file format
- Metadata have to be incorporated according to the international standards of metadata and archive search

In accordance with these conclusions, we came to the following frames of building multimedia databases on the Internet:

1. copy of the primary data in reduced file formats;
2. secondary data database for the Internet;
3. secondary data database of the archive;
4. primary data (digitized archive materials).

We applied the conclusions of the theoretical research into the structure of the Multimedia Internet Database of the Macedonian Contemporary Music and the dynamic web site based on the database.

The practical consequences of creating and publishing this web site are the following:

- Achievement of considerable experience in the field;
- Global affirmation of the Macedonian contemporary music;
- Rare and unaccessible materials become available to the public;
- Integration, correction and digitization of certain textual data.

Multimedia Internet Database of the Macedonian Contemporary Music covers the fields of the existing IRAM secondary data database along with the specific fields for the Internet database.

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